THE

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OF

# MEDICAL SCIENCE.

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### No. LXVI.—MAY 1, 1862.

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M. Butcher on a new operation for the Cicatrical tissue after Burns

## PART I.
## ORIGINAL COMMUNICATIONS.

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ART. I.—*Reports in Operative Surgery.* By RICHARD G. H. BUTCHER, Esq., M.R.I.A., F.R.C.S.I.; Chairman of the Surgical Court of Examiners, and Examiner on Surgery in the Royal College of Surgeons in Ireland; Surgeon to Mercer's Hospital; and Lecturer on Clinical Surgery.

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THE deformities resulting from the contraction of the cicatrical
tissue, reparative after burns, has attracted, over and over again, the
attention of practical surgeons towards remedying the evil—some
patiently investigating the development of the process, and, upon
acquired knowledge, striving to establish a mode of treatment
likely to prevent the change, and to secure, as far as possible, the
normal restitution of the part after the injury inflicted; while others
have strained their ingenuity, judgment, decision, and operative
skill to remove the distortion, set free unnatural connexions, and
thereby restore lost functions to members, to organs, and to parts.
In the whole range of surgery, so interestingly taught and elucidated
by Dupuytren, there is not one subject which, in my opinion, he has
handled with so great a grasp and power as the accident and its
consequences under consideration—Burns. Surely the risks to
which the poor sufferer from burn is exposed, primarily and secon-
darily, must call forth our warmest sympathies, our best exertions.
From the time of the infliction of the injury to the cicatrization of
the part weeks and months must elapse—from the time of the
infliction of the injury to the cicatrization of the part hours, days,
weeks, and months of pain and suffering must be passed through;
and yet not all—danger constantly lurks round the sufferer; and
often death seizes on the creature just as repair is accomplished,
and we are about to exult in the successes of our practice.

Who, when a bad case of burn is confided to him, does not watch
with apprehension the shock—the threatened, and often fatal,
syncope—the imperfect or nervous reaction—the patient sinking
exhausted under febrile tumult of the asthenic kind; or the decep-
tive lull which, in many instances, precedes this form of reaction, as
we see illustrated sometimes in the old,—they may walk after the
accident, yet be dead in 48 hours; or again, reaction of the sthenic
type proving excessive, and life being endangered by the violence of
inflammatory fever. And oh! how many perils threaten during
the progress of this fever, by the implication of internal organs,
especially the lungs, heart, and pericardium, the brain, and, later
again, disease, extensive, of the intestinal mucous membrane, often

sufficient of itself to destroy life; and later still, more surely and certainly, isolated to a part, perforation of the bowel. Many dangers passed over, yet, remotely, in the end, tedious cicatrization, confinement, and discharge, are prone to peril the system by hectic; or the patient may die suddenly, cicatrization being nearly or entirely completed, and in a manner unaccounted for, even on dissection; while at any period throughout this struggle tetanus may supervene, and, as I have illustrated in the pages of this Journal by numerous cases, with but little prospect of remorse or subsidence.

Death escaped, life may be rendered very miserable by the deformity and impairment of function often inseparable from healing of the burn.

Diversified as are the deformities from burns, Dupuytren is of the opinion that they may all be referred to five classes:—

1. Those in which the cicatrix is too narrow.
2. Those in which it is too prominent.
3. Those in which it has formed extensive adhesions.
4. Those in which a cavity has been obliterated.
5. Those in which organs, or an organ, has been destroyed.

Springing from this extensive range, it may readily be surmised that the operations proposed must be varied and modified to suit the case. It is not my purpose here to dwell upon the complicated measures that may be demanded to rectify the vicious union—incision—excision—free detachment of the widely and deeply connecting bands—subcutaneous sections—excision of the cicatrix when limited—semilunar vertical incisions in the sound skin on either side, to permit of the wound being brought together, the edges adjusted, as in the urethro-plastic operation practised by Dieffenbach, and in that recommended by Gay, to facilitate the contracting process in old ulcers with matted edges and boundaries—transplantation of healthy structures, to fill up and cover in the gap the flayed part exhibits either after excision or transverse disunion, accompanied by traction sufficient for the restoration of symmetry. Many of these I have put into execution, several resulting in unparalleled success; and I am deeply impressed with the conviction that, by well-timed, well-planned, and boldly executed operations, closely followed by careful, sedulous dressing, and adjustment of mechanical appliance, according to the exigency of the case, more may be expected and achieved, than even has hitherto been accomplished in this most interesting, yet lamentable, department of our art. I shall now dwell upon the operation which I wish to bring

particularly forward, as novel in its character, and possessing many advantages, and applicable in cases of prominent cicatrices, be they thin or massive in their proportions. Before doing so, however, I shall detail two remarkable cases which, by comparison, become valuable, and their mention here most appropriate, as introductory to the particular mode of proceeding I wish to inculcate.

Years ago—I take the date from my case-book, November 29, 1845—a young man was admitted to Mercer's Hospital with hideous deformity after burn, analogous, in many respects, to the case which I shall presently detail, as to the nature of this distortion, but falling far short of it as to the abundant shedding, development, and contraction of the cicatrical tissue. The patient, William Smith, aged 16 years, had been burned severely five years before the date of his admission—his clothes having ignited as he fell asleep upon the hearth-stone before a large fire in his cabin— destruction of all the tissues on the left side of the neck resulted; protracted suppuration; gradual, slow, yet progressive cicatrization followed; contraction and deformity. The head soon was dragged down to the shoulder; or, when the head was raised to its proper position, then the shoulder was drawn up, being unnaturally elevated several inches above its fellow; the cheek, the mouth, the eye, the ear, were all drawn to the affected side. The whole condition of the part, the countenance, and expression of the patient are admirably represented in Plate II., Fig. 1, the drawing being taken from a fine cast in my collection. The following operation was performed the day after his admission, by the late Mr. Tagert. He made two incisions through the web, removing a large triangular or V shaped piece, the base three inches in length externally at its free edge, the angle close to the neck. Wherever the slightest tension presented itself, on the head being placed in the erect and natural position with the shoulder depressed, it was cut; every seam or root of the cicatrix, wherever straitened, was set free. When the necessary incisions were completed the exposed surfaces were much greater than could, by possibility, have been anticipated. The head, after this extensive dissection, was easily restored to the straight position, but the left eye and angle of the mouth were not much altered or materially rectified towards a better condition. After a few days, the report goes on to say, " An apparatus was applied to keep the head up from the chest, and towards the healthy side ; it consisted of two iron wings, well padded, concave, to embrace each temple, connected posteriorly to a back piece which, inferiorly, passed off in two

expanded concave plates, to rest one upon each shoulder; the back piece had a movable slide upon it, so as to permit the neck-piece to be lengthened when necessary; and connected with the head plates, where they were attached to the back piece, was a horizontal screw by which the head could be elevated from, or depressed to, either shoulder. The lower end of the back piece was retained in place by a strap buckled round the chest, and the chin was supported by a strap and buckle, connected from one temporal plate to the other." This patient was retained in the hospital for five months, the part cicatrized, the greatest care apparently carried out in the dressing of the wound, &c., in a word, in its management, yet, at the end of the report, I find, " Dismissed March 30th, *not much improved.*"

In the catalogue of my museum I find the following report attached to the number of the cast, taken from the patient previous to operation:—" *Cast No.* 53: Distortion, the effect of severe burn. The subject of the injury was a young man aged 16 years, who had been severely burned, five years before, over the entire side of the neck; the present deformity is the result of the cicatrization of the part. The following operation was performed, but without much success:—A V shaped incision was made through the web, the base at its free margin, and the part removed. After this, wherever the integuments seemed tightened, the incisions were extended so as to liberate them freely; the exposed surface, after this proceeding, and on placing the head inclined to the right side, was far greater than could have been anticipated as the result of the incisions; the dragged condition of the eye and mouth were not, however, much benefitted, though the greatest possible care was taken in the dressing of the wound, and the nicest application of mechanical means to keep the head erect, and somewhat to the sound side; yet I must proclaim that little benefit was derived from the operation; though the patient left the hospital, after five months, considerably improved; yet, when I had seen him at a period of six months later, the web was nearly as prominent as before the operation, as indurated and unyielding in its nature."

I shall next detail the steps of an operation, with its results, which I performed on a boy aged three years. The principle of this method was recognised by Celsus; and certainly, in my hands, was followed by a considerable amount of success. The reason why I dwell upon it at all—why I select it from amongst several cases cut after various fashions—is, that it approximates more closely than any other the operation which I shall presently describe, and which

I claim for my name: its success only illustrates, even by the greatest care, a limited amendment, while mine yields a perfect restoration to normal position; neither, however, can bring back the natural colour, or remove the pittings that so frequently exist after the destructive influence of intense heat.

CASE II.—*Extensive Cicatrix after Burn, Binding Down the Chin to the Sternum, Rectified by Operation.*

John B., aged eight years, admitted to Mercer's Hospital, June, 1860. Three years before, he was severely burned about the throat and chest—his clothes having taken fire in front. He presented, on admission, a very pitiable appearance; his chin was bound down literally to the first bone of the sternum, so that the mouth was kept open, and the lower lip not only dragged downwards but prominently forwards; a strong, dense band of cicatrical tissue extended from the chin, in a puckered form, dragging down cheeks, mouth, lower jaw, and becoming expanded by wide-spread claws upon the fore-part of the chest, implicating deeply the integument over the upper thoracic region. So matted was this structure throughout the neighbouring parts, that the slightest attempt to raise the head produced additional depression of the cheeks, and even lower lids, distorting the eyes frightfully; the effort prolonged drew up the clavicles and shoulders. The simple deduction being amply demonstrated by the wide-spread and unyielding nature of the morbid connecting medium. For the appearance of the boy previous to operation, see Plate II., Fig. 2.

On the 20th of the month I operated after the following method:—The child, having been placed lying on the operating table, was quickly brought under the influence of chloroform; the knife was applied over the fore part of the chest by a semicircular sweep, about four inches transversely, the cornua of the curve being a little below the centre of the clavicle on either side, while its concavity embraced all the dense and central portion of the expanded cicatrix below, and fully an inch beyond of healthy structure. The depth of the incision went through the integument and fascia. This extensive flap was then dissected up; the head, at the same time, being elevated, and shoulders depressed, to make tense the binding shreds beneath. It was remarkable how quickly the parts retracted under the touches of the knife, and how high the flap ascended exposing actually the entire lower region of the neck; even as the

Fig. 1



Fig 2



M.r Butcher on a new operation for the Cicatrical tissue after Burns

parts were now exposed portions of the fascia had to be carefully cut through; and even some of the anterior fibres of the mastoid muscles on both right and left sides a little above their clavicular attachment; and, though closely in the proximity of the main vessels of the neck, restraining bands were sought out and divided; by a tedious dissection of this kind the head was got into its natural position. The gaping wound and the exposed healthy parts over the sternum were dressed with lint soaked in oil, and retained by a few turns of a bandage obliquely across the chest, and in a circular manner round the neck; outside this dressing was placed a piece of pasteboard, cut in the form of a stock, rolled in a piece of French wadding and linen outside, so as to make a stiff collar, and thus secure the head from being approximated to, or drooping on, the chest. A few days after this operation I freed the lower lip from the chin by subcutaneous section, and restored it to its proper place.

The effect of the two operations was most marked for good on the entire countenance; the case went on without any unfavourable symptoms; pressure, caustics, astringents, &c., being applied, according to circumstances, and the continued use of the collar persevered in. After a period of little more than four months the parts healed wonderfully well, the entire wound over the sternum and lower part of the neck being covered in by new structure; the motions of the head were nearly restored, and the deformity of the countenance all but removed; several inches were gained between the sternum and the chin; yet there was an irregularity of the surface, a knotted condition of the parts, very unsightly—at least so it would be considered in the female—here, however, it did not much matter, as a cravat would conceal all. On the whole, considering the hideous deformity of the child, I had reason to be well satisfied with the result; yet it did not at all merit the approval which the following operation, and its consequences, elicit and demand:—

CASE III.—*Shocking Deformity after Burn—the Head Bound Down to the Shoulder—Perfectly Cured, with scarcely a Trace of Deformity, by a new Operation.*

Mary M'N., aged 17, admitted into Mercer's Hospital, under my care, June 18, 1860. The young woman was greatly deformed from severe burn, which she sustained four years before. Her parents stated that her clothes took fire, and were reduced to ashes upon her neck; all the skin upon its left side and behind was turned

black—charred; and the shock was so great that her life was
despaired of for many days; her head was affected too; and yet
from this complication she escaped. Days and weeks the black
slough was separating and being cast off; and on several occasions
she had a hard struggle for life. However, after long confinement,
the part cicatrized, contraction going on, and ultimately to the
extent of connecting closely together the head and shoulder on the
affected side. To be more particular, the condition of the patient,
on admission, was as follows:—The expression of the face was
most pitiable, though the features were handsome; yet the days,
and months, and years of misery were stamped upon them, giving
the countenance the most painful cast. The head and shoulder
reciprocated in their bondage, each being distorted hideously, the
former more from its symmetrical position—the head, as it were,
being dragged down to the left shoulder, slowly, steadily, tena-
ciously, as far as the cervical spine could yield; then the uncom-
promising agent—contraction—still persistent, energetic, even against
gravity, brought up the entire shoulder from its normal position,
and approximated it to the more fixed part; the cicatrical tissue,
active in all this displacement, filling up the angle between the
shoulder and head, was most extensive and massive, attached above,
and expanded upon the mastoid process of the temporal bone,
and far behind for two-thirds of the transverse extent of the occipital
bone; wide and expanded, I say, here, at its upper attachments,
while from the mastoid process, in its course downwards to the
shoulder, its proportions were most dense, and firm, and resisting.
The base of the cicatrix, as it passed from the temporal bone to
the shoulder, was three inches and a half, while in thickness it varied
from an inch and a half to an inch and three quarters; it was dense,
fibrous, elastic as India rubber, not sensible to the touch, neither
discoloured by vascular supply, yet bands and spotted depressions,
whiter than the surrounding integument, dotted it throughout; the
neck, by this rigid, powerful cord, was forced down to the left side
as low as the bones would permit; and it was only by lifting the
shoulder, thrusting it up to the extreme, that the head could be
brought into a straight position, or into its vertical axis. Where the
cicatrix grasped the shoulder it did not terminate abruptly; from it
numerous roots or claws spread out—some backwards over the
dorsum of the scapula, some over the superior attachment of the
deltoid—while the anterior margin of the trapezius seemed to
be incorporated in its structure: thus the whole mass was most

uncompromising in its character. The condition of the patient
previous to operation is most faithfully depicted in Plate I., Fig. 1,
by the able hand of Mr. Forster, of Crow-street.

On the 20th of June I operated after the following manner:—
The young woman was stretched on the operating table, and ren-
dered insensible by chloroform; she was rolled gently over on the
right side, so as to render prominent the affected shoulder, and bring
up well to view the neck and the vicious cicatrix throughout its
entire grasp. The parts being put upon the stretch, the knife
was first laid on the integuments over the acromial fibres of
the deltoid, about half an inch lower than this osseous point, and
carried downwards and backwards with a deep semicircular sweep,
and terminating behind and above the bifurcation of the spine of the
scapula; thus the knife travelled in a very curved manner, marking
out a flap fully two inches and a half below the expansion of the
central massive band of the cicatrix; the most convex part of the
curve corresponded in shape to the arrangement of the inodular
tissue, the same extent of sound skin being preserved all round;
this flap was rapidly dissected up, great care being taken not to
bruise or injure it, lest its vitality should be impaired, and that
thus it might refuse the union or perish altogether; its detachment
was with ease effected until the knife arrived at the matted down
disorganised structure, when the knife had to be used with more
decision, deeper, and with more force and freedom, at the same
time that the assistant who had charge of the head made greater
traction upon it towards the sound side, while a second assistant
depressed with more vigour the affected shoulder. By these opposed
forces deep passing bands were made to appear, and readily yield to
the edge of the knife. A long, cautious, I would say, protracted
dissection of those in-passing roots was required at the posterior
triangle of the neck; and, to give some idea of the extent of the
detachment transversely, or from before backwards, it measured
somewhat more than four inches and a half. When this extensive
base, deep set and bound down in all directions, incorporated with
the fascia and involving tissue even beneath it, was set free, it was
gratifying to find how the head and shoulder permitted separation,
but yet not nearly enough. At this stage of the dissection the
parts stood thus:—The exterior flap of several inches was detached,
which, as the head was elevated and the shoulder depressed, slid up,
as it were, above the clavicle; the healthy integument composing a
considerable part of this flap hung flaccid, while the cicatrical tissue

set free so extensively at the root of the neck, and incorporated with the trapezius, having also ascended, owing to detachment and force, for a considerable way, stood prominently out and resisted any further advantages by this method. Throughout this extensive dissection but very little blood flowed—nothing that was not easily controlled.

I next had the flap carefully held up, and put upon the stretch, and then carefully introduced a long narrow-bladed straight bistoury through the massive cicatrical tissue at the base of the flap, and thrust it upwards subcutaneously, along the prominent band to the summit of its temporal and occipital attachment. As the instrument was forced upwards great precaution was used to prevent its point injuring the integument in this long track of from four to five inches; the instrument being introduced upon the flat, its edge was now made to cut down freely from the integument the cicatrical tissue by cautious gentle movements. This being extensively and effectually done on the posterior side of the prominent ridge, the edge of the bistoury was then turned anteriorly, and a similar manipulation carried on. The edge of the instrument was next turned directly backwards, and the cicatrical tissue scored freely by repeated incisions from before backwards and above downwards, throughout its entire extent. To facilitate and render more guarded and certain the action of the bistoury the index finger of my left hand, placed outside the integuments, followed it everywhere, and made additional pressure where requisite; thus, from the consent of action between the two hands, the incisions were perfected with as much accuracy as if exposed to view. Again, as the bistoury worked inside, the index finger of the left hand assisted to separate, to press out, to unfold, as it were, this matted structure. The result of all this subcutaneous proceeding was rendered manifest by the relaxation and flattening of the vicious growth; and on the bistoury being withdrawn the flap lay as flat upon the upper and middle part of the neck as the healthy integument did at its base.

The operation was necessarily tedious; yet, from the admirable way in which the chloroform acted, the creature was unconscious as to pain or suffering: when she had recovered from its influence, I proceeded to dress the part; and upon this proceeding I would wish to be most explicit. In another place I have laid great stress upon the rules which the surgeon should adopt towards saving the flap from undue pressure, being handled or bruised: it should, in all instances, be raised or made tense, as occasion may require, by the

application of forceps; the instrument will only press or even wound the merest point; it will not, as the fingers, compress it in extent, arrest its circulation, and so threaten its vitality. This rule was stringently carried into effect in the present instance. The head was gently inclined to the right shoulder, and steadied so by a few turns of a bandage; compresses were softly applied over the detached integuments and flap so as merely to sustain them in position, to keep them in contact with the parts beneath; and these, again, retained by wide straps of adhesive plaster. I cannot be too impressive here in laying stress upon the way in which this extensive and delicate flap was dealt with. Very little pressure would be sufficient to rob it of its circulation, and so deprive it of accepting of the union offered by the raw surface beneath; therefore it was sedulously guarded against. The arm on the affected side was fastened to a girth round the waist, which efficiently kept the shoulder down. The raw surface from whence the healthy flap was dissected and pushed up presented a wound of considerable magnitude, as large nearly as the hand; thin pledgets of lint, soaked in oil, were laid all over it; these again were covered with a few folds of old linen; and the entire supported by additional straps of sticking-plaster. The patient was then conveyed to bed, and made to lie upon her back, with her head resting on the same plane as her body. By this arrangement there was no approximation of the head and shoulders, and therefore no disturbance of the dressings. On looking at the girl, as she lay in bed, no one could, for a moment, have supposed that by operation the countenance could have undergone so wonderful a change—so marked an improvement. But I shall more particularly dwell upon this matter again. For several days after this severe proceeding she suffered pain; but opium never failed or lost its influence in restoring quiet or procuring repose.

For several days the stomach was upset, and the appetite impaired, owing to the amount of chloroform inhaled, and the restrictions as to position enjoined. Prussic acid, laurel water, and ice, with sedative counter-irritation to the surface were efficient and salutary agents. For days the restricting bands on the head and arm remained untouched; and it was not until the fifth day the dressings on the neck and shoulder were removed. To accomplish this end every portion of the dressings were saturated with tepid water, and the greatest gentleness used in their separation; the adhesive straps readily yielded; and each portion of lint over the flap was gradually turned over, not directly raised, the fingers of

the left hand gently following, thus sustaining the flap, and pre-
venting any interference with its newly-acquired cohesion. So,
likewise, the oiled lint was readily removed from the raw surface.
On the part being fully exposed, it was most gratifying to see how
accurately the flap remained in its adjustment—how flat, regular,
and even the neck preserved its outline; no part whatever showed
an angry disposition. So the dressings were readjusted much as
before, and after the same fashion—the greatest care being taken
to guard against, and prevent the slightest movement of the head
or shoulder from that position in which they were both retained
from the first. Five days later the wound was again dressed;
similar precautions being adopted. And now it was apparent that
all that portion of the cicatrix which had been subcutaneously
detached, incised, folded out, was adherent in its new relations, and
had no tendency whatever to projection or starting out; on the
contrary, it took the shape impressed upon it at the time of opera-
tion, and retained it until the shed lymph and adhesions within
united it there. The exposed surface below presented a granulating
appearance; the dressings were put on in the same way as at first,
the straps of plaster only being laid on tighter.

During a period of three weeks but little alteration was made
in the mode of dressing; at the end of this time, union be-
tween the parts being so firmly contracted, and thus the life of
the flap secured, I guarded against a recurrence of irregularity
by the following procedure:—Having procured a quantity of
thinly-rolled lead, such as is used in packing tea, I folded up
several layers of it, and, by gentle manipulation, moulded it to the
side of the neck and shoulder, it lying in with great obedience to
every inequality of the part; a thin layer of French wadding was
interposed between it and the skin; broad straps of sticking-plaster,
12 to 16 inches long, brought from the back, and across the shoulder,
to the chest and neck, steadied it nicely in position. From day to
day these straps were carefully attended to, lest any undue force
might be exerted, and the part suffer from this even, steady, solid
pressure, and they were relaxed, tightened, or replaced, according
to circumstances. The inferior granulating surface showed a strong
disposition to throw out flaccid, languid granulations; an additional
piece of lead placed over it, thin folded little pledgets of lint being
interposed, exerted a most salutary influence on its repair. No
attempt was made to limit this sore by making traction on its edges;
on the contrary, all efforts tended towards having it healed by

replacement—by an extensive granulating surface fairly cicatrized; every precaution was adopted, even in the application of straps to support the compresses, so that the edges should not be drawn together; for the centre of the strap was placed, as it were, over the centre of the wound, and then its ends carried, at the same time and with the same degree of force, to the healthy integument on either side, so that the edges of the sore were rather pressed back than otherwise.

The case altogether was seven months under treatment. Through out this time the greatest caution was adopted relative to the position of the head, the gentle steady support to the neck, the topical applications, and mode of support to the granulating part; and from the necessity of enforcing abundant reproduction of structure and new skin, the healing was delayed, often stationary, and only again restored to healthy action by the most painstaking and careful dressing, steady strapping with adhesive plaster, gentle stimulation by red precipitate, nitrate of silver, &c.; and above all, I must particularise a lotion which I have found more beneficial than any other application, in life-giving properties, in these cases of languid surfaces, flabby granulations, &c. The fluid consists of water, say, eight ounces—tannic acid, a drachm—sulphate of zinc, a drachm— small pieces of lint, folded into pledgets about the size of a halfpenny, should be soaked in this fluid, and laid evenly upon the surface. A narrow marginal dressing of lint smeared with zinc ointment being first laid on; the entire should then be covered with a piece of lint, spread over with the same salve; and the whole part supported by inch-wide straps of adhesive plaster—one made to overlap the other, and afford the necessary support. This dressing, I repeat, was most advantageous in this special instance, and conduced, in a very remarkable way, to the restoration of so extensive a surface without puckering or contraction.

It is 10 months since the young woman left the hospital cured, and 17 since the operation; yet there has been no disposition whatever to a recurrence of deformity—to projection of that cicatrical tissue so cut up and folded out. My impression is, from a very careful examination of the part, that it has been absorbed or removed in a great degree. Be that as it may, the part shows no irregularity or unevenness, though time sufficient has been allotted for such changes, if they were likely to occur. A few days ago I had a drawing of this young woman made by Mr. Foster, and engraved by him. It is a most perfect resemblance in every way—(See

Plate I., Fig. 2); and I think it is not too much to say she is a very pretty creature. There is no elevation whatever upon the neck, and no disfigurement, save the little dotted white points which I have before alluded to as being produced by the intensity of the applied heat. The hair, as it is gracefully bound, conceals even those traces behind. Marking the large surface from which the flap was dissected and shoved up, is a more vascular condition of the newly cicatrized part; but this may be entirely concealed by a chemisette or high dress. The movements of this young girl's neck are free, unrestrained, and graceful; while the left shoulder holds its rightful position as contrasted with its fellow. This restitution from deformity has likewise wrought a marvellous change upon the spirits, the aspirations, and the hopes of this young creature. I may add, that I have recently performed, in private, an operation almost similar to the one just detailed, and it promises to be in every way as successful.

*Resection and Removal of Bones.*—In continuation of the subject of resection and removal of bones, the following cases, I conceive, afford many important points for consideration; and, moreover, they are highly illustrative of the reparative efforts that may be looked for, and surely depended on, in the earlier periods of life:—

Case IV.—*Death of the Shaft of the Femur from Fracture. Protrusion of One End of the Dead Bone, with Shocking Deformity. Extraction of Six Inches and a half of the Bone. Limb Restored to nearly its Full Length, and Consolidated by the Application of " Butcher's Splint."*

Eliza C., aged 13 years, admitted September 26th, 1860, into Mercer's Hospital. Eight months before, she was thrown down by a dray, and the wheel of this heavy waggon passed over the centre of the left thigh bone, breaking it just below the lesser trochanter, and at the same time inflicting the most severe bruising and contusion; from the disruption of soft parts effusion set in so rapidly that in a short time the limb exceeded in magnitude the sound one by seven or eight inches, and from what I could learn, masked, to a certain extent, the nature of the fracture. The girl was kept at home and managed there, and the parents had the candour to admit that the patient was most ungovernable, and did exactly what she liked, so that no arrangements or directions made or given by the

gentleman who attended were either carried out or acted upon. Soon the consequences of all this neglect became apparent, inflammation exceeded its proper bounds for the effusion of lymph and the deposition of callus; it attacked the periosteum and the bone, detaching the one, and killing the other, these changes no doubt being brought about more actively by the impressed violence at the time of injury; the whole shaft of the thigh bone perished, and nature made the effort for its extrusion by the formation of a large abscess, corresponding to the original solution of continuity in the bone, and steadily determining to the surface. Through all these local changes the constitutional distress and excitement were extreme, the patient passing through nights of watchfulness and pain, distorting the limb on pillows, and changing it constantly from one position to another in search of ease; at length the abscess gave way on the upper and outer side of the limb, and shortly after the upper end of the lower fragment of the thigh bone appeared in the aperture, and once so, the contraction of the muscles forced it out still more and more, all resistance to its extremity being removed. Again, from the patient constantly propping up the leg and knee with pillows in the hope of relieving pain by relaxing parts, the shortening of the thigh was still further favoured, until at length it lay absolutely on the abdomen with the leg rigidly flexed upon the thigh. Her health was now so completely broken down, and her nights and days of misery so continuous and prolonged, that she was brought to hospital and placed under my care.

Nothing could present a more wretched aspect than the child, the very life-springs seemed sapped by the long-continued irritation and withering fever. Emaciation of the whole body had taken place in a most remarkable manner, and the face of this young person had assumed all the contracted wrinkled characters of age, except the eyes which were lustrous, projecting, and expressive of watchfulness even to irritability; the mouth too had characters of distress, the angles somewhat retracted, lips thinned, white, and tightened, with the teeth partially exposed and coated with a yellowish paste; the hair had considerably fallen out, and the skin over the face, hands and chest, was moist and clammy, while that over the abdomen and affected lower extremity was dry, furfuraceous, and scaly; the pulse was so rapid as scarcely to be counted, and it was weak and feeble, and even irregularly intermittent. And now as to the condition of the limb—as I have said before, it lay drawn

up upon the abdomen, distorted in the most striking manner; not only was the upper fragment displaced in this direction, but all that below the solution of continuity was likewise drawn up, with the upper end of the lower fragment thrust out, projecting two and a half inches; thus the thigh was shortened, and curved here in a remarkable way, and lay so closely on the abdomen that it was only by steady pressure the fingers were permitted between both surfaces; in like manner the leg, emaciated and powerless, lay rigidly upon the posterior surface of the thigh, and could not by any gentle traction be stirred from its long acquired position. After a long and painstaking investigation of the case, I came to the determination to try and save the limb. The healthy state of the knee joint, the non-implication of the hip joint, the integrity of the leg and ankle, conspired to make me adopt this view; yet, on the other hand, the difficulties which seemed to surround the case appeared almost insurmountable. The extraction of the dead bone, and that to so great an extent as the probe indicated—the bringing of the powerfully flexed upper fragment and knee from off the abdomen, and restoring them in their original direction—the unbending of the long flexed leg from the thigh—all this accomplished, the extension of the limb and its maintenance from retraction; and lastly, the all-important question as to the compensative powers of nature in the restitution of so extensive a portion of the osseous structure, and the adaptativeness of the new material to the original design and functions of the part.

On the day after admission, the child being placed under the influence of chloroform, the projecting dead bone, which was partially loose, was grasped in the blades of a strong forceps, and after some to and fro and partially circular movements, the concealed end was started from its connexions and drawn out. It was now confirmed that the shaft of the bone had perished for six inches and a half in length; the preparation is in my possession, and depicted in its full size in Plate III., Fig. 2; but a slight flow of blood followed the removal of this extensive portion of bone, and I was rather sorry to see the deficient vascular supply, lest it might be indicative of the reproductive functions of the part being at fault, for up to this time but little thickening was present, or deposition of new material. On the removal of the support which this deadened bone afforded to more than the lower two-thirds of the limb, the curve and flaccidity became still greater and more disheartening, yet by gentle and continued force—the child under chloroform—I

Fig 1

Fig 2
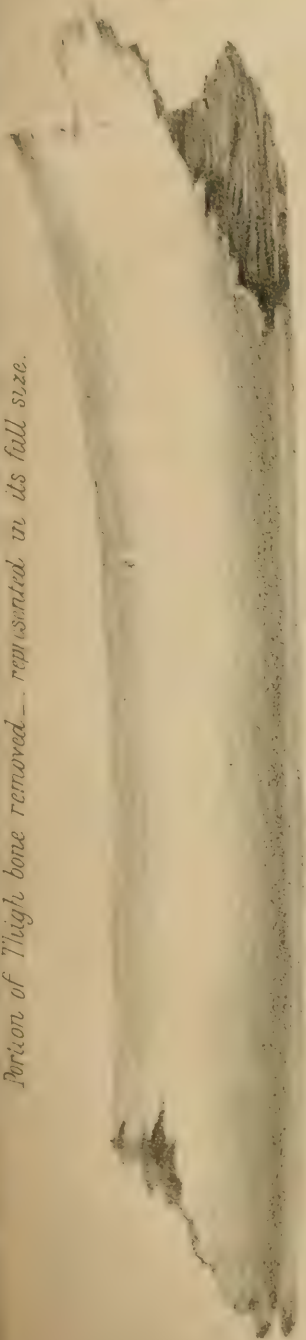
*Portion of Thigh bone removed — represented in its full size.*

Mr Butcher on Excision of Bones and Joints

drew it down longer than before, and applied a well padded scored splint around it. I next commenced to bring down the limb from the trunk, first being only able to insinuate a thin pad between it and the abdomen, and likewise a thin one between the leg and thigh; from day to day I steadily increased the bulk of these in each position, and had them, as space was gained, formed into triangular wedge-shaped supports, maintained and made more effective by the proper pressure and support of bandages around the pelvis and the limb, in a figure of eight form. When the leg was brought a little beyond a right angle, then a splint was laid behind the limb from the tuberosities of the ischium above, to about the lower third of the leg; the limb was stretched upon this as far as it would yield, without much pain, and all the space between it and the under surface of the limb padded, so as nearly to fill the arch; a bandage was then carefully rolled from the foot upwards, and of course as it ascended, with a moderate degree of tightness around the limb and splint; this gently applied force tended to press the knee back, and thus gradually to straighten the leg and thigh.

After considerable trouble and repetition of dressings, at the end of about three weeks I had the limb sufficiently down to apply my own splint: now the reparative material was becoming abundant, and though it was moulded in a certain degree by the restraint of the scored splint, yet it was apparent that a greater force should be employed, and extension freely made and permanently kept up. On the 20th of October I applied my own splint; having first drawn down the limb by long, steady, and powerful traction, kept up for nearly twenty minutes. An assistant fixing the pelvis and upper fragment, I clasped the knee with both hands and steadily drew it in an opposite direction downwards, thus greatly elongating the thigh, and bringing it to within two inches of the length of the sound one; a second assistant then took my place, and kept up this extension, while I adjusted the long splint; a well padded yet narrow lac was placed along the descending ramus of the pubis and that of the ischium, the ends brought up behind and before, a layer of French wadding being interposed; the long splint was then laid along the outside of the limb, properly padded, and the foot fastened to it below; the ends of the counter extending lac were then brought through the holes of the splint which reached to the arm-pit, and tightly tied. Thus the limb was maintained at the extreme point of extension that it could bear, and, as it was necessary to support it behind,

in order to bring in an additional force, a splint was laid along
its posterior surface, and the concave space between it and the
limb filled with soft pads; then a roller was applied from the
ankle upwards, lashing the leg to the long splint, and, as it ascended
to the knee, supporting in its turns the posterior splint, and so
pressing the knee backwards, and thus still more tending to
straighten it. So on, the roller was continued up to the groin, and
then made to pass across the pelvis and the upper part of the long
splint, in a figure of eight form, and so maintaining it to the trunk
and thus securing the limb in a straight line. Some simple dressing
was laid over the ulcerated opening, from which escaped a very
trifling quantity of healthy pus.

After a fortnight's application of the splint in this way, the
limb became perfectly straight, the knee on a level with the
sound one. I need scarcely mention that, during all this time
of trial, the little patient was exceedingly intolerant of treat-
ment, yet, by management she was compelled to submit, all due
caution being observed to mitigate her sufferings in every way;
indeed she was forced to admit she did not suffer nearly the pain
that she endured before she came to hospital; independent of her
statements altogether, her improved appearance bore testimony to
the fact. No doubt suitable food, stimulants, and opium, in abun-
dance, were administered with a free hand, and conduced to this end.
Her sleep returned and appetite sharpened, blood was abundantly
made and healthily appropriated to the restitution of tissues, and so
the languid and debilitated frame was strengthened, and nervous
energy invigorated. Thus these important changes were brought
about by the most assiduous care, within a period of three months.
The bringing down of the limb, the straightening gradually of it,
was a trying and wearisome process, I admit, yet I could not for a
moment warrant any more expeditious or violent mode. It might
be presumed, if the patient was placed under chloroform and rendered
insensible, the thing might be done at once. Well, I apprehend, if
it had been so dealt with, the disruption of parts that could not so
suddenly or readily yield would have led to the formation of
abscesses, precursored by active and wide-spread inflammation with
its concomitant train of additional evil disturbances.

January 1, 1861. The report goes on to state that the girl had
lost all her characteristic delicacy, that she had become fat and robust
—that the reparative material effused, though deposited slowly at
first, yet was then in abundant quantity, not only filling up the

extensive gap between the upper and lower ends of the thigh bone, but likewise sufficiently massive in its diameter; and it was becoming firmer every day. During all this time permanent extension was guardedly kept up, and the limb was only two inches shorter than its fellow, and it was maintained throughout in its proper axis—the transverse piece of wood upon which the splint rests preventing inversion or eversion. Towards the end of the month the uniting medium was perfectly solid and unyielding; and on the 1st of February she was dismissed cured. I have seen her since then, on several occasions, and the power of the limb and its movements have steadily increased. Nine months have now passed over since she left the hospital—she came specially at my request, in order that I might have a drawing made; the drawing and the engraving have been executed by Mr. Forster, of Crow-street, whose name is a sufficient guarantee for its faithfulness and execution. (See Plate III., Fig. 1.) Her condition now is as follows:—she is strong, healthy, and robust; as she stands at rest no one would suppose that there was anything amiss with her; on the most accurate measurements her left thigh is scarcely two inches shorter than the right, and a boot raised with cork on the inside so perfectly compensates for the deficiency, that it is scarcely perceived; she has only a slight halt in walking, the functions of the hip and knee joints being entirely restored. The case, in all its bearings, presents to my mind as many important points for reflective study as any on record, while the practical deductions flowing from it cannot be over-estimated.

Case V.—*Extensive Caries of the Upper and Lower End of the Tibia; Excision and Gouging out of the Diseased Bone; Perfect Recovery, with the Functions of the Knee and Ankle Joints Preserved.*

Eliza Martin, a fair-haired girl, aged 10; admitted to Mercer's Hospital, February 12, 1861. She was reduced to the lowest state from long-continued disease of the left tibia. Above and below, the bone was affected. So apparently incurable did the case appear, and so emaciated and depressed the patient, that amputation of the limb had on several occasions been proposed, previous to her being put under my care. On the above date she was in the last stage of hectic; she was thinned and worn out from profuse colliquative sweats, with alternating diarrhœa; her sleep was unrefreshing, and

for nights absent till the approach of morning. Appetite capricious and very small; and the process of nutritive assimilation altogether subverted. The pulse was rapid, feeble, and small; and there was a general irritability about the child painful to witness. The nervous symptoms assumed a very definitive character. For several weeks before the child's admission she was attacked by chorea; and this condition maintained in the most aggravated form, even in conjunction with the characterized fever that I have just alluded to. The history of the case pointed to the facts—of injury sustained from falling down a ladder producing violent inflammation over the tibia, above and below, and its extreme ends, save the articulating surfaces—of injury inflicted where the leuco-phlegmatic temperament predominated, when, after the subsidence of acute inflammatory action, a low, mischievous, disintegrating action was set up in the stricken parts, terminating in abscess of the soft parts covering the bones, and caries of their structure. From this local injury, extensive both above and below, the constitutional symptoms alluded to were evoked. The constitutional and local symptoms were each so developed in their way that amputation seemed not an unreasonable proposal. Yet, from the successes which I had obtained, in almost similar cases, by excision, I determined on cutting out the diseased bone in each position, and straining every effort to save the limb.

February 20th.—The girl was placed on the operating table, and rendered insensible by the administration of chloroform. The limb being steadied above and below, I made an incision about four inches in extent along the anterior and inner surface of the expanded head of the tibia, through the ulcerated soft parts; their integuments were freely dissected from off the bone, revealing a very large extent of it softened, discoloured, some broken up, and carious; the compact layer in front being decayed. The point of a fine Luer's saw was introduced, and made to cut effectively, so as to give full room for manipulation with the gouge; nothing could answer the purpose better than this instrument. Great care was taken not to interfere with the upper articular surface of the bone, many layers beneath it being fortunately healthy. From this point downwards, about three inches of the cancellated texture of the bone together with its anterior and lateral walls, were freely and cautiously removed, while the posterior wall, with a stratum of the cancellated tissue, being healthy, were suffered to remain, and so maintain the integrity and continuity of the bone. I next proceeded, in a like manner, to deal with the lower end, but had to contend with a little

more difficulty. The wall of the bone here was not softened to the same extent as that above, though the disintegration internally was nearly to as great an extent. Examination with the probe, through the small aperture that led to the interior, confirmed this view; an abundant supply of sanious pus persistently welled up and flowed over from it. The integuments being divided to about three inches in extent, the bone was freely laid bare on its anterior and inner surface, and immediately over the ankle. The crown of a trephine was applied, and an opening being freely made with a fine saw, the aperture was increased, and so the carious cancellated tissue gouged out to nearly two inches in extent. The same watchfulness was had in requisition here, as above, not to impinge on the articular surface of the bone. The entire disorganised part being taken away, the cavities, both above and below, were filled with long slips of lint soaked in oil, and pressed down firmly into every recess; a mode of dressing which was perfectly effectual in stopping hemorrhage, giving due support, and stimulating, by its presence, healthy action. The limb was then carefully rolled, and, as the bandage passed up, an additional compress placed over the wounds so as to retain steadily the internal adjustment; next, the limb was placed on a padded splint, extending upwards nearly to the buttock, and retained immovably by a bandage, so as to prevent any flexion of the knee joint.

During the time necessary for this severe operation the child was kept under the influence of chloroform; and, on this agent being discontinued, she quickly awakened to consciousness, and quite unaware of what had been done. Very trifling fever followed the operation; all irritation was subdued by opium; I have no fear of it, even in children. Five days were allowed to pass over before the wounds were dressed; the lint was easily removed, as already healthy pus began to be secreted from each cavity. It was interesting to observe how, day after day, accessions of granulations were added, and tone was imparted to their growth by the gentle pressure of the lint, compresses, and bandage. A fortnight had not elapsed when the beneficial effects of the operation were becoming evident; the sweats ceased, and the diarrhœa disappeared; the pulse came down many beats, and the sleep returned; food was eagerly sought for, and healthily assimilated; and, at the end of the third week, the chorea had disappeared. I must state here that tonics, zinc, iron, &c., were administered; but I cannot separate, in my own mind, her altered state—her rapidly mended condition, from the soothing

effects produced by an operation that at once took away the primitive source of irritation and debility. Months passed over, and so the child's health was improved; and gradually the granulations filled up the large chasms cut out, and ultimately assumed a firm, dense, and osseous character, competent to take the office of that which they replaced. A month since, the child left the hospital perfectly cured. A long time was requisite to repair the shattered health—the rotten bone. Operative surgery, in fact, did for both what medicine could never achieve—what the *vis medicatrix naturæ* was incompetent to effect. As the bone was repaired so was all swelling dispersed, both in the limb and contiguous joints; quickly the knee and ankle regained their motions, their perfect movements; and, as the repaired shaft of the bone was restored to solidity, so did it bear with impunity the weight of the body, and the shocks transmitted through it in progression. This young girl, that was certainly doomed to be mutilated for life by amputation, is now running about with her playfellows, rescued from deformity by a better mode of treatment—resection.

Case VI.—*Complicated Amputation of the Leg, to save the Knee Joint, demanding Ligature of the Popliteal Artery as a Secondary Proceeding; Pyemia Successfully Treated by Mercury and Stimulants. Recovery.*

R. H., aged 17 years, admitted to Mercer's Hospital December 31, 1860. In childhood she had been a miserable martyr to scrofula, which, after marking the neck, arms, and some parts of the trunk, remained in abeyance for a few years—however, for the last eight years she has been a constant sufferer. The soft parts in the ham, back of the thigh, and calf of the leg were attacked with scrofulous deposits throughout, running into deep and extensive ulcerations, followed by rigid cicatrices contracting the leg upon the thigh at an obtuse angle, and permanently maintaining it so. After long and weary confinement these parts were healed in this deformed way; scarcely were they so when the same disease attacked the soft parts and bones of the tarsus, toes, and ankle joint of the same limb; wide-spread ulcerations and caries at length settled in the part. At times nature seemed to make an effort at repair, but in a few hours all improvement would be swept away. After repeated and fruitless attempts through a long succession of time—eight years—no permanent improvement could be produced, or any change, to be relied

on, effected; and so her health gradually gave way, and her strength declined under wasting fever. When she came under my care, the limb was a deformed shapeless mass, totally spoiled in its proportions and integral parts. The leg was considerably flexed on the thigh and fixed so, all the integuments covering the calf and its muscular structure were deeply pitted and matted together; while the soft parts and bones of the foot assumed a most shapeless mass, three to four times its normal size, extensively ulcerated, pouring out copious fœtid discharge, and accompanied always with pain, but of an intolerable character when the patient moved about in the erect position with the limb dependent. The young woman supplicated for its removal, and indeed there was no prospect of relief by any milder method; to save the knee joint was an all-important consideration, and to effect this object I planned an operation somewhat similar to that which I have described at the end of my Second Memoir on Excision of the Knee Joint.[a] The patient being carefully managed for about a month after her admission to hospital; on the 1st of February I operated in the following way :—The patient was placed on the operating table and brought under the influence of chloroform, and the femoral artery commanded at the groin. Standing on the right side of the patient I cut out a long flap from the anterior surface of the leg, and fully two-thirds of its length; this was rapidly dissected up and maintained by an assistant. I then transfixed the only healthy part of the calf from its outer side, and cut it free; I next carried the blade of the amputating knife along the outer side of the cicatrix in the thigh to its highest attachment, then along its inner side in a similar manner; the incisions, from the obliquity given to the knife, cut out the cicatrix in a wedge-shaped form, the base externally; this being detached, the bones were freed from the soft parts and sawn across, with a slight curve in front, about two inches below the articulation; numerous arteries spouted, seven or eight considerable vessels were tied, besides the posterior tibial and fibular arteries, which were cut very high up—immediately after their origin; this could not be avoided as the vessels were incorporated with the back of the cicatrix. The flap was now closed, and the patient allowed to rest for some minutes after revival from the chloroform. Just after being removed from the operating theatre arterial blood gushed out from the stump; fortunately I was beside the patient as she was carried away, and at once grasped the

[a] Dublin Quarterly Journal, February, 1857.

part, and had her brought back to the operating table.    An assistant made pressure on the femoral artery at the groin with the end of a key covered with flannel, before I relaxed my steady gripe which commanded the vessel.    I found that, owing to the causes necessitating the ligature of the posterior tibial artery so close to the main trunk, and not having probably sufficient hold, it was forced off during the movement of the patient by the impulsive current from above.    I made a vertical incision over the popliteal artery, and ligatured it at the angle of flexure, carefully liberating it from the vein with which its connexion was very intimate.    After this proceeding the patient was removed to bed, the thigh elevated, the stump evenly supported, and the long anterior flap slightly curved backwards and rested on the pillow; thus the entire was left to glaze.  Wine and opium were administered rather freely, as the pulse was laboured and shabby.

At 3 o'clock, p.m., five hours after the operation, I proceeded to dress the stump, the patient being again placed under the influence of chloroform.    I first connected the external and somewhat posterior short flap, through the entire of its extent, about three inches, with the outer side of the anterior long one, by several points of wire suture; I then folded the long anterior flap over the curved ends of the bones and up along the posterior surface of the thigh, it fitting admirably into the deep sulcus from which the cicatrix was cut out.    Numerous points of the wire suture were employed to retain it in accurate position; by the turning back of the long anterior flap in this manner it will be understood how it had, as it were, contained in its curve on the outer side, the short external and posterior one, so that the short flap was stitched to it throughout its entire circumference at isolated points.    Nothing could be more accurate than the adaptation of these parts; each fitted admirably to the other.    In order to give additional support, long compresses were laid over the flap in the axis of the limb, steadied by longer straps of adhesive plaster in the same direction, and a few turns of a roller very gently, merely retentive—the object being to guard against the flap drooping, and, on the other hand, not to interrupt its vitalizing supply; the ligatures were brought out at the internal angle of the wound.    The stump was then placed on pillows, but not much elevated, the object being that no additional difficulties should be added to the extensive flap getting its arterial support; the unforeseen event, the ligature of the popliteal depriving the part, to a certain extent, of that free anastomosis that was considerably estimated

and greatly relied upon for its maintenance. Immediately after, a full opiate was administered, and repeated at intervals during the day.

Everything went on most favourably up to the 5th, when I removed the dressings, the edges of the wound had united perfectly in many parts; at the extreme end of the flap that turned up into the angle on the thigh, it was dark for about a quarter of an inch, and evidently its life was gone; everywhere else the flap was steadied, and, for the most part, solidified in its position; I reapplied dressings, actuated by the principles just detailed, and ordered a moderate quantity of wine, nutritious diet, &c. Without any apparently assignable reason, on the 9th, a remarkable change was ushered in—great prostration and uneasiness referred to the chest, with a rapid small pulse; I at once raised up the patient, conceiving those symptoms might have arisen from pulmonary engorgement, occasioned by the somewhat doubled up position that the patient had lain in from the time of the operation. At a later period of the day utter prostration, and I feared pyemia was set in; on stripping the stump the extreme end of the flap was being separated by a deep ulcerated line, elsewhere the edges of the wound were coated with a yellowish, unhealthy deposit. The wound was dressed with lint steeped in turpentine, long strips of linen, wetted in warm water, were applied as adhesive straps to support the flap, the end of which refused union; this mode afforded a very efficient means. Over all was placed a thin linseed meal poultice, made with chloride of soda solution and water (one drachm to the ounce), over this a piece of oiled silk, the entire retained by rollers, and the part supported on a pillow—ordered six ounces of wine, a full turpentine enema to act on the confined bowels, and a draught with ten drops of turpentine, tincture of cardamoms, &c.; also placed patient on small doses of mercury—two grains of calomel and quarter of a grain of opium every third hour. 11 p.m.—Pain very much diminished; bowels well freed; wine and beef tea. February 10th—Much in same state; slight lurking pain in lower part of right chest; wound not much altered in character, and dressed as on yesterday; to continue the pills; blistered over the seat of pain; pulse so shabby, wine to be increased to 10 ounces through the day, and 6 for night. On the 11th no improvement; respiration more difficult, alæ nasi expanded during each effort; cannot make a full inspiration, pain so sharp; purulent smell from breath quite perceptible; lips livid; pulse so rapid as scarcely to be numbered; great prostration, lividity, and

sunken countenance; but little change in the wound; ordered tur-
pentine draughts, and, to allay the constant cough of irritation,
prussic acid and morphia—a large blister over the sternum—10
ounces of wine by day, and 6 at night—2 quarts of beef tea,
and the calomel to be continued. On the 12th the report states:—
She had some sleep; pulse not so rapid; respiration not so embar-
rassed; pain in chest less, but cannot take in a full inspiration,
stopped by acute pain; however, on the whole, this symptom is
better than on yesterday; purulent fœtor intolerable from the
breath; no pain in the wound; stump dressed as before; the
patient lies on her back still and quiet like a log, so little evidences
of vitality about her; however she swallows all her nutriment—10
ounces of wine, eggs beaten up with spirits and warm milk, 2
quarts of beef tea, 8 ounces of wine for night; calomel and opium
to be continued. 13th.—Her respiration somewhat improved;
purulent expectoration in quantities, alæ nasi not now dilating, yet
deep inspiration as yet perfectly impracticable. Has consumed all
the nutriment and wine given to her, without the slightest sickness
of stomach; the wound looks healthy; dressed as before; changed
the patient to a fresh bed, propped her up with pillows, to relieve
the congested lungs, for a couple of hours at a time; bowels well
freed; calomel and opium continued, with a full opiate at night;
ordered 16 ounces of wine, 2 quarts of beef tea, an egg with
boiled milk, and 2 ounces of spirit twice in the day and night.
14th.—But little change; to continue everything; expectoration of
purulent matter still abundant, and breath loaded with its fœtor.
15th.—There is a remarkable change in the pulse for the better, its
beat is more determined, and not hurried in a current, yet still very
rapid; the pain has left the right chest altogether, but still lurks
beneath the sternum, and deep in the left lung; respiration still
hurried and short; mercurial diarrhœa, so stopped the pills; placed
2 drachms of mercurial ointment in each arm-pit, and gave 40
drops of laudanum night and morning; to continue 16 ounces of
wine, 4 ounces of spirit, eggs and beef tea as before.

The patient continued much in the same state, depressed and sunken,
until the 21st, when there was a marked improvement—the pulse
coming down several beats; the respiration more developed and not
so rapid; the absence of pain; the changed aspect of the countenance
from its leaden lifeless colour; the restored movements of the eyes
from their settled stare. In conjunction with this altered consti-
tutional manifestation, there was a corresponding local change: the

little deadened margin of the flap was entirely cast off, healthy granulations had sprung up to compensate for it. The ligatures were unusually delayed—not being cast off until the 22nd; the separation of the cord from the main artery I looked forward to, not without apprehension; however, the first few days of repose and quiet efficiently sealed the vessel. The patient gradually and steadily progressed until the 27th, when a large depôt of matter formed near the buttock. I had to cut very deep for it, and certainly not less than a pint of matter escaped. A few days later I had to open another near the crest of the ilium, when about eight ounces flowed off; the stump was entirely healed at this time, and the patient was confined to bed solely for the management of those extensive abscesses by the careful adjustment of pads and bandages; diminishing gradually the pressure from the circumference to the centre of each, and having the incision open for the escape of pus as fast as secreted, these became gradually obliterated. During the latter part of the management of this case, the large quantities of wine and spirits were, of course, dispensed with, but a very nutritious regimen was even still adhered to. At the end of March she was perfectly well; the stump was admirably formed; the long, transplanted flap lay well up in its berth behind, covering the ends of the bones in a most perfect way, without strain or tension; a few days later and the young woman was quite happy, moving about freely with a wooden leg.

It is unnecessary to go back upon or to recapitulate the several points of interest contained in this case—there are many in a practical way that cannot be surpassed; there is one, however, that I must, before concluding, specially allude to; I refer to the treatment of pyemia by the abundant exhibition of stimulants, and the free administration of mercury and opium. In several instances, some of which have been published in these reports, I have been fortunate enough, by this mode of treatment, to rescue the patient from the very jaws of death, and the present case adds another to the list. I do not think this is the place to canvass the various opinions of Pathologists as to the nature of the affection, and the theories in support of their views, but I do with confidence affirm, that the practical lesson—the aphorism which I have laid down—will not be found deficient in efficacy or unproductive of good.

Art. II.— *Observations on Epistaxis.* By Rawdon Macnamara, M.R.I.A., Professor of Materia Medica, R.C.S.I., and one of the Surgeons of the Meath Hospital, &c.

Few lesions are popularly considered of graver import than hemorrhages, no matter what their seat; yet of all these, to none is less importance in general estimation attached than to that which makes its exit through the nostrils; and why this should be so, can only be explained on the two-fold ground of its extreme frequency and of ignorance. People so repeatedly witness a bleeding from the nose unattended with any evident serious consequence, the public generally are so much in the habit of attributing the same effect to the same cause, that it is not to be wondered at that so every-day an occurrence should give rise to but little alarm, and it is only when the loss of blood becomes serious as to its amount, and difficult in its being checked, that any importance is attached to what must, or at all events *should*, give rise to anxious consideration on the part of the reflecting physician. Numbers of people suffer from repeated attacks of epistaxis, of a more or less grave character, who never think of consulting a medical man on the subject; and it is only when an attack more obstinate than usual occurs that the surgeon is sent for, and but too frequently every resource of his art has to be put in force ere the hemorrhage be arrested, and the safety of his patient secured. Nor, in my mind, are we ourselves sufficiently free from censure in this respect. To many an attack of epistaxis is but an attack of epistaxis, to be combated by the one routine plan of treatment—its exciting cause is not investigated with sufficient care; our every energy is directed to arresting the flow of blood, without that due weighing of the exciting cause that the nature of the case so imperatively demands; and we hasten to apply our styptics, &c., to control that hemorrhage, which, after all, may prove to have been but a salutary effort of nature. Nor is this so much to be wondered at, when one for a moment reflects on the scene that but too frequently presents itself on the surgeon's arrival; basins *apparently* filled—cloths saturated with blood—anxious relatives and friends surrounding, and officiously but ineffectually tendering relief to the patient, scared at what, to the non-surgical eye, must appear a serious loss of blood. On the moment of his arrival the surgeon is besieged with entreaties to afford that relief without which dissolution appears imminent;

everything conspires to render hurried that decision which should be calm, and founded on a rational consideration of the nature of the case, based on a correct diagnosis of the cause of the hemorrhage; without which future serious injury to the patient may occur, and on the correct establishment of which, much more than the present apparently successful treatment of the case may depend; impressed with the importance of these considerations, therefore, is it that I venture to put on record the result of much observation and consideration of a lesion, that, in my mind, is of grave moment.

The first and most important consideration for us to entertain is, whether the popular opinion be correct, and whether that in every case, a bleeding from the nose is but a bleeding from the nose, to be looked on as having but the one source or origin, and to be treated but on the one plan. That such opinion is founded on very crude notions, far removed from our advanced stage of etiological and pathological knowledge, is but too evident to every one who merits the name of physician or surgeon; yet some advantage may accrue from a glance at these causes, and a retrospect of what has been written by the great fathers of our art; so that I shall not apologise for pressing their labours into my service, and subsequently adding thereto any trifling information in my power to place at the disposal of my professional brethren.

*In limine*, I may be permitted to observe, that every case of epistaxis may, in my opinion, be reduced under one or other of two great classes—the *Sthenic* or the *Asthenic*. No matter what be its cause, whether accidental, critical, or idiopathic, it must be answerable to one or other of these two great classes, and, as it belongs to one or other of them will its treatment vary, and be successful, or the reverse; and I cannot sufficiently express, in my opinion, the importance of the practitioner, called on to treat such a case, deciding, in his own mind, to which of these two classes the case in question may belong: to the patient will this decision be all important, and to the practitioner, in so far as his reputation is involved in the successful treatment of the case on scientific and sure grounds, is such correct solution of the question, if not on higher and more conscientious grounds, also of equal importance.

The exciting causes of epistaxis may be reduced under two great heads, viz.:—external and internal: amongst the former may be ranked all injuries or violence applied to the nostrils, or in their vicinity—such as blows or wounds of greater or lesser importance, from the slighter box, to that which is attended with fracture of the

nasal bones; the evulsion of polypi; caries of the bones of the nose;
the introduction into the nasal cavities of irritant substances, and
of foreign bodies, whether in the form of solids, fluids, or vapours;
violent sneezing. Undue increase of temperature, whether solar or
artificial, directed on the head, by predisposing to afflux of blood to
the head, also gives rise to epistaxis; for instance, the direct action
of the sun's rays on the uncovered head, or on it when protected
with black coverings or metallic head pieces, is a not unfrequent
source of epistaxis; the exposure of the head to rays of heat radiating
from a fire, sitting in an ill-ventilated room, lighted from above by
gas, favours cerebral congestion, frequently followed by epistaxis.
Of all these external exciting causes of epistaxis, each of my readers
must be able to furnish for himself many examples. I, myself,
have seen a very obstinate bleeding from the nose produced in a
young school-boy by the forcible introduction into the nostril of a
piece of slate pencil; in another case, the incautious inhalation of
the vapours of strong caustic water of ammonia was followed by a
sudden and violent gush of blood from the nostril, most difficult to
arrest; and in some cases I have, to my own satisfaction, been enabled
to trace a frequently recurring epistaxis to the patient's habit of using
Cork snuff; whilst every school-boy's experience furnishes him
with many examples of "bloody noses," resulting from well planted
blows on that organ.

It is with the *internal* causes of epistaxis, however, that the
division into sthenic and asthenic is principally concerned, and these
have well been classified by J. P. Frank, in his masterly treatise—
*De Curandis Hominum Morbis*—into those which increase the flow
of blood to the head, and those which impede its return from it.
" *Quæ vel motum sanguinis ad caput augent, vel cruoris regressum
præpediunt*." Amongst the former of these may be ranked inflam-
matory diseases, erysipelas, small-pox, measles (" *pre-eminently*,"
writes Frank), catarrh, violent anger, protracted and severe head-
aches, cerebral congestion, dependent positions of the head, violent
muscular exercises, severe vomiting, alcoholic excesses, protracted
watchfulness; and, amongst the latter, mental emotions, accom-
panied either with profound terror, or excess of modesty, deep sighing,
great anxiety, grief; as also shouting, speaking for a long time,
excessive laughter, crying, singing, playing on wind instruments,
great straining of any kind, fits of coughing, dyspnœa, cardiac,
pulmonic, hepatic, splenic or renal disease, congestion of any of the
abdominal viscera, over distention of the stomach or intestines

whether with food, flatus, or fœcal matters, ascites, the gravid uterus, pressure on any of the large veins by tumours of a scrofulous. malignant, or other type, intestinal worms, especially ascarides, convulsions, particularly of an epileptic character, cold, long continued and applied to the extremities, constrained positions of the body, ill-fitting garments producing irregular pressure, tight lacing, suppression of the menstrual secretion, or of an habitual hemorrhoidal discharge. Also such diseases as have a tendency to produce a spanemic condition of the blood; for instance, typhoid and adynamic fevers, scurvy, long exposure of the body to the influence of water, as in fishing, or protracted immersion, or long continued exposure to rain, resulting in that condition named by Huxham, *acute scorbutus*, in which, generally superadded to hemorrhage from other situations, we meet with epistaxis of a most formidable character, and most difficult to control. A state of blood somewhat similar is induced by the too long continued use of alkaline, as also (but in a minor degree, and from quite a different cause), of acid remedies. In Huxham's Essay on Fevers, we find a most interesting case, where hemorrhage from the mucous surfaces, dependent on this condition of the blood, ensued from long continued excessive doses of the sesquicarbonate of ammonia. This case is so instructive that I am tempted to quote it:—

" I had lately under my care a gentleman of fortune and family, who so habituated himself to the use of vast quantities of the *volatile salts*, that ladies commonly smell to, that at length he would eat them in a very astonishing manner, as other people eat *sugared carraway seeds.*—A Δριμυφαγεία with a vengeance!—The consequence soon was, that he brought on a hectic fever, vast hemorrhages from the intestines, nose, and gums, every one of his teeth dropped out, and he could eat nothing solid; he wasted vastly in his flesh, and his muscles became as soft and flabby as those of a new-born infant; and broke out all over his body in pustules, which itched most intolerably, so that he scratched himself continually, and tore his skin with his nails in a very shocking manner; his urine was always excessively high coloured, turbid, and very fœtid. He was at last, with great difficulty, persuaded to leave this pernicious custom, but he had so effectually ruined his constitution, that, though he rubbed on in a very miserable manner for several months, he died tabid, and in the highest degree of a *marasmus ;*— and I am persuaded, he would have died much sooner, had he not constantly drank very freely of the most fine and generous wines,

and daily used large quantities of asses' milk, and antiscorbutic juices well acidulated with juice of Seville oranges, lemons, &c."

It may not be amiss to extract from my note book a few cases in which the epistaxis was due to one or other of these causes; and the first that I shall submit is that of M.B., a girl, aged 18 years, admitted December, 1861, into Meath Hospital, under Dr. Stokes' care, suffering under symmetric erysipelas of the face. I was consulted about this girl the evening before, and she presented high febrile symptoms, and stated that her complaint was ushered in with general bronchial symptoms, flushing of the face, rigors, headache, loss of appetite, and that, on the previous evening, she suffered from a smart attack of epistaxis, which, with difficulty, was controlled, and not until she had *lost a considerable quantity of blood from the nose*, a statement fully confirmed by the coagula that still plugged up the nares. I sent her into hospital that evening, and next morning the invasion of *erysipelas* was of a well-marked type. The further record of the case would be foreign to the object of this paper, but I may be permitted to observe, that the quantity of blood that she lost on this occasion was fully evidenced by her pulse, the character of which early called for the administration of wine.

The effect of *violent anger* in producing epistaxis is well exhibited in the following case:—Some years since I was summoned in all haste to attend a young gentleman in Leeson-street, under the following circumstances:—His father had found it necessary to remonstrate with him on some portion of his conduct that was displeasing to him, and, in the course of the altercation that ensued, struck him a few light blows—*light*, but, I believe, the *first* that this young gentleman had ever received; the effect produced was such as to alarm the whole family—his face flushed up, and became of a mahogany hue, his eyes became blood-shot, the veins in his neck and temples stood out as whipcord, he foamed at the mouth, became inarticulate with rage, and, in fact, assumed all the appearance of one about to have an apoplectic seizure; on my arrival I found him in this most alarming state, but before I could take any measures for his relief, a gush of blood took place from the nostrils, which, instead of checking, I need scarcely say I encouraged; and after a considerable quantity of blood was lost, he fell into a profound sleep, accompanied with much stertorous breathing, and, on my visit next morning, was as if nothing had ever happened.

I had recently under my care in the Meath Hospital, a most

remarkable case of epistaxis, resulting from *mental emotion;* for the particulars of which, as also for the great ability and zeal he displayed in the treatment of the case, I am indebted to my friend, Mr. Mulock, who at that time filled the responsible post of resident surgical pupil.

E. P., aged 26 years, admitted into Meath Hospital, 9th October, 1861; suffering from severe epistaxis. She had, earlier in the day, applied for relief, and Mr. Parr had suggested, what he has on repeated occasions found of great service in almost every variety of hemorrhage—ergot of rye, which, however, from her condition was contraindicated, she being four months advanced in pregnancy; she accordingly received a mixture of the solution of acetate of morphia, acetate of lead, tincture of digitalis, syrup and water; was ordered, on her return home, to remain quiet, and to keep wet cloths round her head; this plan of treatment had some temporary effect, but in a short time the hemorrhage returned with increased violence; the patient came back to the hospital, and Mr. Mulock plugged both anterior and posterior nares; in despite of which, however, the blood forced its way out several times in a most uncontrollable manner, and was only, for short periods, arrested by continued streams of cold water. Mr. Macnamara saw her in the morning, when the hemorrhage appeared to be checked, but recurred again several times during the day; the patient became much blanched, exhausted, greatly terrified, pulse dicrotous. In the evening Mr. Macnamara was sent for, and, by his advice, the plugs in the nares, both anterior and posterior, were withdrawn; the patient was made to insufflate a saturated solution of a powder composed of equal parts of tannic acid, sulphate of alum, and sulphate of zinc; the plugs, enlarged in size, were then re-introduced, the anterior ones steeped in a solution of muriated tincture of iron, and a large blister was applied to the nape of the neck. In despite of all this, the hemorrhage recurred on several occasions in consequence of the patient persisting in removing the anterior plugs, but was always much controlled by the use of the saturated solution described above, combined with the internal administration of the muriated tincture of iron in full doses. She slowly convalesced, with occasional returns of the hemorrhage, and at last, however, left the hospital on the 26th October; since which period she has had no relapse. In this case she attributed the attack of epistaxis to *profound grief* for the loss of her father, who had died some short time previously.

One of the most remarkable cases of epistaxis that I ever witnessed, was in the person of the late well-known Mr. R. B., to whose assistance, on several occasions, I was summoned for most severe hæmorrhage from the nose; without a moment's notice a gush of blood, of the most profuse character, would take place from the nostrils, and more than once the quantity so lost would exceed a pint in amount; he was of a spare habit of body—anything but of an apoplectic appearance—never experienced any premonitory symptoms, and yet these attacks of epistaxis were persistent in character, and grave as to the amount of blood lost. If in attendance early after their occurrence, I was able to regulate, in a great measure, the quantity of blood so lost, but were any time allowed to elapse, the loss of blood was sure to be serious in quantity. The plan pursued was the diligent use of the saturated solution employed in P's. case; the application of a *well* exhausted cupping glass to the nape of the neck, and, subsequently, of blisters in the same region, coupled with the free administration of stimulants, wine, &c. Circumstances induced us to suspect that he had a heart of degenerate muscular structure, a suspicion that was subsequently verified by the *post mortem* examination of his body; his death occurred very suddenly, after about half an hour's suffering of intense dyspnœa, and the muscular structure of the heart was found much softened, friable, with a quantity of fat superimposed on it; and oil globules were easily, on pressure, afforded from its walls. In this case I have no hesitation in ascribing the epistaxis to the condition of the heart, nor is it the only case that I could adduce, were such, in my opinion, necessary.

The influence of splenic engorgement in producing epistaxis has long been admitted by all authors on the subject. I should, therefore, not introduce the following case, but that, independent of this complication and connexion, it deserves to be recorded.

Early in this year I was summoned to visit a young lady, apparently in the enjoyment of robust health; she complained of a deep-seated pain in the left side, and of a sense of swelling and enlargement in the region of the spleen. She stated that for some time she had, without any accountable reason, been subject to *slight epistaxis*; her general health had been good, but the pain in the side and the sense of swelling there, were most distressing. In every other respect her general health appeared to be unimpaired. The gentleman who had been in attendance previous to my arrival, had leeched and blistered her over the seat of her uneasiness, with,

however, but little benefit. A careful examination left no doubt on my mind that that side was considerably larger than the other, and the impression forced itself on my mind that it was some lesion of the spleen; at all events the disease, whatever it might be, was clearly situated in the abdominal, and not the thoracic cavity; still her general appearance contraindicated any strumous or malignant affection, and her history entirely put aside all possible connexion of the affection with ague; she had no symptoms to warrant such an assumption—had never lived in any fenny or marshy district; in fact, previous to the attack, having been for some time resident in the healthiest part of one of our most salubrious outlets—Rath-mines. The treatment adopted, after some time seemed so much to improve her, that my visits were considered no longer necessary. On the very night of the day on which I left her, the old pain and sense of swelling returned, but in a ten-fold more aggravated form. Next night she had intense rigors; all next day and night a con-tinuation of the pain and swelling, but, if possible, in a more intense form, and the following morning, after a night of sleepless agony, she felt sudden relief, following a sensation as if something burst internally whilst throwing herself about from side to side, in search of some relief from her agony, in change of posture; she fell asleep, and, after a few hours, awoke with a feeling of intense nausea, called for a basin, and threw up from the stomach very nearly a quart of healthy laudable pus, mixed with copious streaks and clots of blood; for some days after this, the sensation of nausea at intervals returned, and she recovered in about ten days, without one other bad symptom. In this case, the preceding epistaxis was evidently the result of splenic engorgement—an engorgement which subse-quently degenerated into suppuration, and terminated, most for-tunately, by adhesion to, ulceration through, and discharge of the contents of the abscess, by the stomach—a view of the case in which I was, at a later period, supported by the late Mr. Rynd, who kindly saw the case for me during a brief period of absence from town. Since then up to the present moment, a period of nearly eight months, this young lady has enjoyed uninterrupted good health; for about a month afterwards she occasionally complained, on any sudden or violent motion, of a sensation as if something was *tearing* in the old seat of pain, but even that symptom has now long since disappeared.

For the following most instructive case of epistaxis, dependent on renal disease, I am indebted to my friend, Dr. Kidd—I transcribe it in his own words:—

"My Dear Macnamara—The leading particulars of the case of epistaxis I referred to, are as follows:—A lady, a native of Tasmania, but latterly residing in Pembrokeshire, came under my care in July last, aged about 38, married 10 years, during which she had 16 miscarriages, but never passed the third or fourth month of pregnancy; she had been under treatment for uterine disease before I saw her. When I saw her the catamenia had ceased for some two or three months; she had been suffering much from constant vomiting and dyspeptic symptoms. She had a very anemic appearance; her lips were white and pallid. For six weeks she had had repeated attacks of epistaxis, for which she had been treated with gallic acid. On the least scratch or breach of the surface of the skin, she bled very freely; even rubbing with her nails caused the blood to flow so as to stain her dress to a great extent. In such a state of defibrination was the blood, that the slightest pressure caused an ecchymosis, and she was covered with black, yellow, or orange patches; the limbs were swollen and anasarcous. My first impression was, that the case was purpura hemorrhagica, but there were no purpuric spots. I then looked to the gums, but there was no appearance of scurvy; I next directed my attention to the kidneys, and here, I believe, discovered the cause of all her suffering. The secretion of urine was scanty, not more than oz. xii in 24 hours, sp. g. 1010; when boiled, one-eighth of the tube was filled with coagulated albumen. After this the anasarca increased and effusion took place into the cavity of the abdomen. The hemorrhagic tendency continued, and she had repeated attacks of epistaxis; the worst of these occurred on the 18th of Nov., induced, probably, by picking at her nose. This continued, more or less continuously, for 24 hours, resisting all the ordinary means of stopping it; when her anterior nares were plugged the blood ran down her throat; I thought I should be obliged to plug the posterior nares, but, before doing so, tried the following method, which proved very effectual:— I rolled cotton wool round a probe, and then saturated it with tincture of the muriate of iron, and with this mopped out the nose as far as I could reach, having failed with a speculum to find the bleeding point; I then plugged the anterior nares with cotton, wet with tincture of the muriate of iron, and made her sit on a low seat with a chair in front of her, with a cushion on the back of it, on which she rested her head; in this position the blood gravitated towards the anterior nares, and was there coagulated by the iron, and very soon stopped the bleeding.

" There was no pain or irritation produced by the iron, and no return of the bleeding since.

" Yours truly, G. H. Kidd."

But of all the varied causes of epistaxis that I have enumerated, the most insidious—that which but too frequently is most over-looked, and yet which is most potent in its influence—is scurvy. Each of my readers must have witnessed more than one case in his own practice illustrative of the truth of this assertion  The following instance—occurring in the practice of one of the most gifted physicians, the most accurate observers, that has lived in the present century, J. P. Franks—is too valuable to be omitted on the present occasion; and, in my mind, its principal value lies in the fact of the cause of the epistaxis not having been recognised by so acute an observer for some time; it occurs in page 136 of the second part of the fifth volume of his great work—" *De Curandis Hominum Morbis.*"

" Of internal causes, there is scarcely any of greater potency in promoting a flow of blood from the nostrils than scurvy; occasion-ally, indeed, the scorbutic tendency is not evinced for some time by any other symptom than this very hemorrhage.  For example, we had the charge, at our clinique, of a man from whose nostrils blood copiously gushing forth induced us anxiously to seek for the cause of this lesion.  The gums of this man (a tolerably strong one), were neither spongy or bleeding, nor were there any maculæ on the skin, or any dyspnœa present.  The spleen presented an enlarged and knotted appearance, as is usual in these countries; the arteries, fuller and frequent, struck the finger with a singular harshness; the patient was hot, and presented the fallacious appearance of inflam-matory fever.  Seduced by these appearances, we opened a vein, and drew a pint of blood, which, after a time, was densely buffed. At night a profuse discharge of blood again burst forth from the nostrils, yet in the morning we found the pulse harder and fuller than yesterday, and increased symptoms of fever.  The venesection was repeated, and the blood was almost more deeply buffed than before; about 10 hours afterwards the blood gushed forth with such violence that it could scarcely be restrained by surgical means, six pints having been lost in a very short space of time.  On the following day we found the fulness and hardness of the pulse, or the fever, by no means diminished by this, but the entire surface of the body in every direction covered with scorbutic maculæ.  The debilitating plan of treatment on this account being abandoned, we instantly

had recourse to a generous wine, with lemon juice and sugar, and under the use of tonics and of a nourishing diet, in a short space of time had our patient convalescent. A few months afterwards we had another example, similar to this, in a young man with an emaciated and pallid frame from whose nostrils blood would frequently gush forth, but principally when attending our clinique. He also, as in the last case, presented to our notice a full, frequent, and vibrating pulse; venesection produced for us blood that quickly became buffed, but it was not able to prevent the return of the hemorrhage. After a time, on account of the increase of the fever, and of the hardness and frequency of the pulse, we had recourse to another bleeding, which was attended with a similar appearance of the blood; but it was in vain that thus we tried to cure the disease. Hence, although the maculæ were not present, still aware of this scorbutic diathesis, and remembering the former case, we ordered bark, with better diet, and an allowance of good wine, and cured our patient under the rapid influence of this more judicious plan of treatment."

In extracting these cases from the works of J. P. Franks, I consider that but little apology is due to my readers; at the present day the value of the writings of this truly remarkable man is but very insufficiently recognised—a fact principally, in my opinion, due to the non-existence (so far as I am aware), of any edition of his works in English. The new Sydenham Society would undertake a task most acceptable to our profession were they to produce for us a good English version of the masterly treatise from which I have translated the foregoing cases.

The influence of disturbed cerebral circulation is but too generally recognised to require here the record of any cases to establish its existence. The following case, however, (of which I only give a sketch), is, in many particulars, so interesting, not alone on account of this connexion, but also as showing the relief that may follow the depletion so produced, that I am induced to repeat it here.

Early in last year I was asked to see a young lady, aged about 15 years, under the following circumstances:—She had been for some time under the care of my distinguished friend, Dr. Wilde, for conjunctivitis of an exaggerated character; gradually, however, the following additional symptoms presented themselves—intense pain in the head, much aggravated by the recumbent position—constant moaning, persistent even during sleep; in this stage of her illness an hyperæsthetic state of the skin, so much so, that no

matter how gently she was touched, it would arouse her from apparently the profoundest slumber; but the most remarkable feature in the case, and that for which I was consulted, was the suddenness with which she would fall into a state of profound sleep. Sitting in her chair, in the midst of a conversation apparently of the highest interest for her, in the middle of a sentence, her chin would drop forward on the sternum, and she was in a profound slumber—so profound that the loudest *noise* could not disturb her, but, the *slightest touch*, and she would start up as wide awake as if she never had been asleep; the same phenomenon would occur at her meals, in the midst of the process of mastication, with the morsel still in her mouth, suddenly would she drop off asleep, and many was the time that her relatives dreaded lest she would thus be choked; coming down stairs she would lean up against the wall and be off to sleep. The catamenial period had presented itself a few months previously, and, in this respect, everything was normal· But perhaps the most painful scene was to witness her at the piano (she was highly educated, and for her years an accomplished musician); on more than one occasion her aunt would ask her to play for me some piece or other of music. The first few pages would be played with great spirit and accuracy, but when she came to the last page or so, one could easily recognise the struggle with which the performance was carried on, and the last few bars were painful beyond description, for the slow laboured effort with which she concluded the piece—then a deep sigh, and then she was once again fast asleep. This state of affairs continued for some time, becoming each day, if possible, worse, and the pain in the head became so intolerable when she assumed the recumbent position, that at last she resolutely declined going to bed at all, and for many weeks passed her nights in the erect position in an arm chair; thus she expressed herself as being free from pain. An ingenious experiment was devised by her father to see whether this pain might not be hysterical; she was allowed to go asleep in the erect position, and then gently dropped into the recumbent one; after a moment or two deep moans evinced that even in her sleep this position gave rise to the intolerable pain in the head, and after a few further moments of intense suffering, she would completely awake, and at once assume the erect position, with very great comparative relief. For the purposes of this paper it would be idle to mention the many phases, complications, and various plans of treatment adopted in this case; suffice it to say, that her convalescence may be dated

from a rather sharp attack of epistaxis, and this occuring after
repeated applications of leeches in different directions about the
head, by which means depletion had been carried on as far as we
judged that it could be done with prudence.

For many years it has been discussed (with more zeal than cor-
responding amount of benefit in the treatment of the disease),
whether the blood in epistaxis be furnished by the veins, arteries,
or capillaries. Franks, in the treatise to which I have already
alluded, states, that it is difficult to decide whether it be from the
veins or arteries that this blood be poured forth; but that he has
himself frequently witnessed, in this situation, a varicose condition
of the veins. " Num venæ, num vero arteriæ hunc fundant, hoc
arduum est dicere. In chronico profluvio varicosum sæpe indolem
venarum subesse novimus; in eo, quod hypersthenicum est, arterias
nunc læsas, nunc finibus quibus rorem in nares exhalant, dilatatas
suspicamur." Now, when so competent an authority states that he
has himself *witnessed* anything, we are bound to accept it as a fact;
but to the " suspicamur " we may be permitted to place on record
our expression of dissent—the vessels that supply the nose are
entirely of too small a calibre to account for the profuse hemorrhage
that we occasionally, nay frequently, witness in this situation; and
for many years past, I have been at a loss, satisfactorily to account
for the phenomenon, until, in a conversation that I had on the sub-
ject with my valued friend Dr. Ledwich, he mentioned to me what
seems to be the true anatomical reason, for which, he himself was
indebted to some German authority, whose name, however, he now
forgets. This gentleman drew attention to the existence in the
turbinated bones of channels or depressions, with which, of course,
every practical anatomist had long been familiar. Across these is
stretched the mucous membrane lining the nostril, converting those
channels into complete canals or sinuses. In these the venous blood
exists always in a state of *stasis*, for the purpose of allowing the
transudation of that fluid which should always lubricate the Schnei-
derian membrane. When, from any cause, a number of these are
ruptured, of course, we have a profuse hemorrhagic discharge; and
their very anatomical configuration is sufficient to explain why, in
many cases it is so difficult to check the bleeding; whilst if the
hemorrhage depends on an anemic or spanemic state of the consti-
tution, this condition of affairs is most favourable to the continued
and persistent drain of blood from the system. Believing, as I do,
that this is the true explanation of the source from whence the

blood is furnished, I must beg of my readers to carry it with them in their minds, as, in explaining the efficacy of some of the plans suggested for treating epistaxis, we shall have occasion to revert to this anatomical arrangement.

As to the premonitory symptoms that usher in an attack of epistaxis, they may be divided into remote and immediate. The remote ones having for their seat the position, in the body, of the viscus in which the cause originates—the immediate ones in the majority of cases being trifling, and so insufficiently marked, as not to arrest the attention of the patient until the hemorrhage set in. The former of these would open up so wide a field, that I must content myself with simply reminding my readers of the variety of causes on which the epistaxis may depend; and in cases where the epistaxis is of repeated occurrence, attention to the symptoms generally associated with each of such diseases will be sufficient to warn us of the impending danger. The immediate symptoms are, as I have already stated, of so vague a character as but too frequently to escape altogether the patient's attention; perhaps of all, the most frequently present is a sensation of titilation and itching of the nares; in many we meet with a feeling of fulness of the head, frontal weight—varying from a feeling of uneasiness to positive vertigo, *tinnitus aurium*—sense of fulness and constriction in the large veins of the neck, spots before the eyes, flashes of light; in some extreme cases, a sense of fulness and positive pain in the neighbourhood of the vertebral vessels; the patient sometimes is heavy and somnolent, at others fidgety and restless; but in the great majority of cases, the first intimation the patient has, is the escape of blood from the nostril, varying in quantity from the flow *guttatim*, to that *pleno rivo;* this, in the majority of cases, comes but from *one* nostril, occasionally, but far more rarely, from both; but, even in this case, we will remark that the flow is far more profuse from one than the other nostril. It has long been a favourite theory, that the blood escapes from that nostril which corresponds to the side in which is seated the *cause* of the hemorrhage—for instance, if it be from congestion of the right lung, the blood flows from the right nostril, and *vice versa;* if it be in the liver that the disease lies, the blood will escape from the right nostril, but from the left, if it be in the spleen, and so on; now, though my experience will not lead me to vouch for this statement as being a law of universal application, still, I am inclined, to some extent, to vouch for its truth. As far as my memory serves me

now, in most of the cases of typhoid fever in which I have witnessed this phenomenon, the blood has escaped from the left nostril; and here we have sound reasons for believing the spleen to be the viscus, on the engorgement of which the epistaxis depends; whilst in one case at least of hepatic disease, in which I witnessed repeated hemorrhage from the nose, it invariably came from the right nostril. Whether this, however, be a coincidence or a law, can only be decided by repeated, accurate, and extensive observation; it may be remarked, however, that Franks inclines to the adoption of this theory.

Perhaps one of the most important questions a medical man can be requested to decide, is that involved in a correct prognosis of the case which he is called upon to treat; second, and second only, to his accurate diagnosis and judicious treatment of the case in question. Fortunately for us, and occasionally more fortunately still for the patients and their friends themselves (for " where ignorance is bliss, 'tis folly to be wise"), we are not so frequently in this, as in other lesions, pressed for our prognosis. As I have already stated, people are in the habit of looking on epistaxis as so common, ordinary, every-day an occurrence, that they rarely look beyond the present, and so as the hemorrhage be checked, give themselves no further trouble about the serious questions that may be involved in the correct interpretation of the state of constitution giving rise to this, but too frequently, most serious and significant affection. If the surgeon, however, has but traced the symptom to its origin, he will experience but slight difficulty in coming to as accurate a conclusion on the point as our finite judgment will admit of. In general terms, I may express it as my opinion, that the gravity of the case, cæteris paribus, increases with the years of the patient. In childhood and in early youth we frequently meet with cases of epistaxis of but slight importance, transitory in their nature, and, most probably, caused by abdominal congestion, dependent on some error of diet or other passing cause; not so, however, in the more advanced periods of our life; every such case demands at our hands most careful investigation, and just consideration of each and every cause that may give rise to it. Should we be so fortunate as to arrive at a correct solution of this problem, we may find ourselves in a position to be, if not of substantial service to the patient entrusted to our care, at all events, of being able to give an accurate prognosis of the course that the case is likely to pursue. When the epistaxis occurs in any of our continued fevers, it may, as in

typhoid fever, be looked on only as a normal occurrence or symptom
to be expected in the natural course of events; or it may be of most
serious, if not fatal, import, as in the advanced periods of typhus,
scarlatina, measles, small-pox—in these cases evidencing a deterio-
rated condition of the blood itself, the more serious the later it
occurs in the progress of the disease. In acute scorbutus, and in that
condition of the blood met with in patients who have been subjected
to protracted immersion in water, epistaxis, though rarely a soli-
tary hemorrhagic symptom, is a most serious one—most intractable
in its character, and of the gravest importance. When it owes its
origin to disturbed cerebral circulation—when it is, in fact, accom-
panied with other evidences of determination of blood to the head—
the prognosis must be grave, especially if the patient will not submit
to the plan of treatment sure to be suggested by the judicious
physician; here not only is it a warning kindly given us by nature
itself of the impending danger, but it acts as one of the safety
valves by which the danger may be warded off. When accom-
panied with other symptoms of the existence of the so-called fatty
heart, our prognosis must be grave, and so on, the prognosis in
each case depending on, and to be measured by, the importance of
the primary lesion to which the epistaxis owes its origin.

When the surgeon is summoned to such a case, the prominent
idea in the mind of each non-medical bystander is—"how he will
stop the hemorrhage;" the first question, however, that the real
master of his art should decide is—*whether he should take steps to
stop it all or not;* a question only to be correctly answered by taking
into account the true cause on which the epistaxis may be dependent.
In general terms it may be laid down that, if the epistaxis be of a
sthenic type, it should not be arrested, but, on the contrary, be
encouraged, always so long as it be kept within due bounds. So
long as the pulse preserves its force and rythm, the eye its lustre,
the cheek its colour, the extremities their temperature, the heart its
normal impetus and force, no serious danger can, but, on the con-
trary, good will, accrue from the loss of blood; should it, however,
exceed these limits—should symptoms of faintness and flagging
circulation evince themselves, then, *but not till then,* is the surgeon
called on to interfere. In epistaxis of the asthenic type, however,
we cannot lay down so general a rule; occasionally it may, even in
these cases, be of benefit, but far more frequently is it likely to
prove prejudicial; certain it is, that in this condition of affairs in no
case would it be justifiable to allow the hemorrhage to proceed to

anything like so great an extent as in the preceding. Indeed, in
these cases, perhaps the safest rule—when we take into consideration
the time that may have been spent in procuring the attendance of
the surgeon, the quantity of blood that, in all probability, will have
been lost ere his arrival—will be to exert ourselves to arrest the flow
as speedily as possible. Nor can this, in the majority of cases, be
easily effected; indeed, in the more serious cases, it is but too
frequently entirely impracticable; and, even if successful in our
exertions in this direction, it is only but to see them baffled by an
escape of blood through some other channel. In such cases our
every exertion should be directed to the employment of such means
*as will effect a radical change in the character of the blood itself*,
superadded to those that we may either locally or generally use for
the purpose of restraining its flow. What those should be, the special
nature of each case will indicate, and without their exhibition other
treatment of the case will be futile.

When we reflect on the means employed by nature, unassisted by
art, for arresting hemorrhage, and which may be concisely summed
up in four words—contraction, retraction, coagulation, syncope: con-
traction of the open mouth of the bleeding vessel, retraction of the
vessel itself within its sheath, the plugging up of the open mouth of
the vessel with coagulated blood, or the much diminished impetus of
the circulation due to the enfeebled action of the heart caused by
syncope—when we reflect, I say, on these means, and if we accept
the theory that I have already placed before my readers of the source
from whence the blood flows, it will be evident that the first two—
contraction and retraction—are, for anatomical reasons, unlikely to
be of much use in checking the flow of the blood; and that, when
nature plays the part of surgeon, it is by one or other, or both
combined, of the two latter plans she effects the cure. And, in fact,
every day experience establishes for us the truth of that which
theory would suggest—the spontaneous arrest of the hemorrhage,
whenever of a serious nature, being almost invariably attributable to
the mechanical pressure of a coagulum—a fact which tends much to
confirm me in the opinion that what has been already put forward
is the true solution of the *questio vexata*, the source from whence
the blood springs in epistaxis. And it is most important that these
clots should not be disturbed; in this case the *nimia diligentia* of
the surgeon is sure to do mischief and cause a return of the hemor-
rhage, if it lead him, before some days, to disturb the plug placed by
nature in the very position best suited for controlling the bleeding,

and made by her of the material least likely to injuriously affect the patient.

Once decided on interfering with the hemorrhage, it behoves the surgeon to consider the means which his art has placed at his disposal for that purpose; these we will find may be classified under two heads—general and local—terms which explain themselves, and which we shall proceed to discuss in the order in which they are written. To the class of general remedies belong all those medicines recognised as astringents; each one of them in its turn has had its advocate; and after all, perhaps, but little difference, if they be possessed of an equal amount of astringency, exists in their respective merits; thus we may administer internally galls, tannic and gallic acids, catechu, kino, oak bark, logwood, matico, the mineral acids, alum, the more astringent of the preparations of iron; or we may administer sedatives, such as opium and digitalis, or medicines that combine both a sedative and astringent property, such as the acetate of lead; or we may depend on purgatives, or the astringent vegetable tonics; or that class which act on the blood, checking the scorbutic tendency, such as fresh vegetables, the vegetable acids, and pre-eminently of these lemon juice; or we may prescribe a medicine first suggested by Spajrani, and favourably reported on by Négrier, Pignacea, and others—the ergot of rye; or we may order turpentine, or the chlorate of potash, or camphor combined with opium, and many others, the use of which has been signalized from time to time, but the value of which has not had the stamp of experience.

Now, to the most superficial mind, it must be evident that we cannot prescribe these remedies indiscriminately in every case of epistaxis. Why one should be preferred to another must depend on the cause of the hemorrhage; if it be sthenic in its type we administer such medicines as will produce a decided impression on the system, *whilst at the same time we encourage the flow of blood;* perhaps in such a case as this no combination will be found more useful than salines with digitalis, as in this formula:—

℞  Infusion of roses, to eight ounces; sulphate of magnesia, two ounces; tincture of digitalis, two drachms; dilute sulphuric acid, two drachms; of which two table spoonfuls should be taken every second hour till the effect be produced.

Repeatedly have I seen marked benefit from such a combination; nor, on the cessation of the epistaxis, is the treatment to end here. The treatment still must be continued, directed in such a manner as to correct the constitutional state that gives rise to the hemorrhage,

and the diet and habits of life of our patient must come in for their
full share of attention at the hands of the practitioner.

In such cases as these it is that the abstraction of blood, either
by leeches, cupping, or venesection, has been advocated. I can
fully recognise the value of this practice if it be directed against the
state of constitution giving rise to the epistaxis, and if the flow of
blood itself be not sufficient to produce the desired impression on
the system; but, if it be sufficient, this line of practice is most
injudicious. We can procure the required amount of blood by
encouraging the epistaxis; why then have recourse to other means
for its abstraction? And if the hemorrhage has already exceeded
due bounds, why increase the mischief by taking more blood away?
If the epistaxis be salutary, but not sufficient in quantity, then we
may deplete, but we deplete not to arrest the hemorrhage, but
because it is not already sufficient, and, in that case, our depletion
is directed, not against the epistaxis, but against the disease that
gave rise to the epistaxis. When conducted on such principles the
abstraction of blood is based on sound theory; but to talk of
venesection, leeching, or cupping, as amongst the remedies for
epistaxis, as such, is, in my opinion, most erroneous. The cupping
to which I now allude is, however, not to be confounded with *dry*
cupping—a most useful remedy, but applicable to quite a different
condition of affairs to that which we are now considering.

Presuming, however, that the case be one calling for prompt
suppression of the hemorrhage, on which of these *constitutional*
remedies are we to rely? The answer to this question is—that
this will entirely depend on the state of constitution present in the
subject of the epistaxis. If it be a simple case of passive epistaxis,
occurring in a delicate patient, and owning, for its proximate cause,
some trifling congestion, due perhaps to position, such as reading
for a long time with the head bent forward, &c., &c., we cannot
do better than at once have recourse to five or six grain doses of
fresh prepared powder of ergot of rye, repeated according to the
emergency of the case, every 10 or 15 minutes. The first person
who drew the notice of his professional brethren to this interesting
property of the secale cornutum, was Dr. Spajrani, in a communi-
cation published by him in *Omodei's Annali Universali di Medi-
cina e Chirurgia.* In addition to cases of hemorrhage from other
situations in which he found it of service, he recorded two cases of
epistaxis in which its exhibition was attended with the happiest
results, and since that period (1830), it has been tried by many

other practitioners, with varying success; its most zealous advocate, however, is my old valued friend, Mr. J. J. Parr, in whose name the old students of the institution will recognise the efficient and experienced resident medical officer of the Meath Hospital; he informs me that a long and frequently repeated experience of it justifies him in considering it a remedy of sovereign utility, not only in this, but in many other forms of hemorrhage. In this class of cases I have found a mixture containing the acetate of lead in combination with the acetate of morphia and distilled vinegar also of great service; and, after we have checked the flow of blood, we will find the preparations of cinchona in combination with the dilute phosphoric acid, or of quinine in the form of pill, combined with camphor and the extract of henbane or of hops, of great value in correcting the peculiar cachectic state that predisposes to a return of the hemorrhage.

In that form of passive epistaxis connected with the anemic condition, I have found few remedies of greater service than the tincture of the sesquichloride of iron, in tolerably full doses. I generally prescribe it in combination with some of the pure vegetable bitters, such as quassia or columba, in from 15 to 20 drop doses every three hours; and indeed, in my opinion, the treatment of the majority of cases of asthenic epistaxis will not be properly concluded without the subsequent exhibition, for some time, of somewhat smaller doses of this most valuable medicine. It corrects the cachectic condition which predisposes to the return of the epistaxis; when present it controls it most sensibly, and in every particular materially improves the general health of our patient.

In that form of epistaxis which, contemporaneously with hemorrhages in other situations, appears in purpura, in those whose blood has undergone some serious depravation in the advanced stages of what are known as blood diseases, or by long exposure to wet, I believe that I am but expressing the unanimous opinion of the profession in giving the palm to turpentine, either alone in capsules, or in the form of emulsion, or combined with brandy or whiskey, in the form of punch. If in these cases medicine is to be of any use we must place our reliance on turpentine. The punch to which I allude is made by adding from half to a full wine glass full of spirits of turpentine to a tumbler of brandy or whiskey punch, and administering it, in severe cases, to the patient in as short a space of time as he can swallow it. The extraordinary results that ensue in apparently hopeless cases from the exhibition of this horrid dose require to be witnessed before they can be believed.

The external and local means relied on for arresting epistaxis are as varied as they are numerous—proceeding from the simplest of popular remedies, such as dashing cold water on the nares, back of the neck, pubes, &c., up to one, occasionally, of the most troublesome operations in surgery—plugging the posterior nares. We shall consider them in the order in which they have been mentioned.

The dashing of cold water on the back of the neck, on the top of the head, on the os frontis, the nares, and the pubes, is, in many cases, of signal service; yet it does not always act exactly in the same way. When applied in the immediate vicinity of the hemorrhage it acts by repelling the blood from the part, and so allowing time for the formation of a clot or coagulum, by which the bleeding point is plugged up. When applied at a distance from the part, such as over the pubes, the first action is to repel the blood *from*, the second to determine it *to* the part, the result of which is remotely to affect the circulation at the bleeding point, and by the temporary respite so afforded to allow of the formation of the coagulum. It is in this way also that the popular remedies—the key of the hall-door, or the cold smoothing iron, applied to the back of the neck—act, first by repulsion from, and then by derivation of blood to a part remote from the position of the lesion. I shall presently have occasion to point out that, in some of our more strictly surgical efforts, we have copied those homely popular remedies, and that with signal advantage to our patients. A remedy which latterly has become so popular that it may be ranked amongst those of popular origin, owes its first suggestion to M. Négrier. I allude to the elevation of the arm, of the side affected with the epistaxis, over the head, and its retention in that position for some time. M. Négrier speaks in high terms of the success attending this practice; and explains it on the theory that the heart has but a given amount of propulsive power, which is exhausted in propelling the blood up along the arm against gravity, and thus the bleeding vessel is deprived of it to a certain extent, and the hemorrhage thereby checked. Mr. Journez, a Belgian army surgeon, records some eight and twenty cases, occurring in troops marching under a hot sun, in his charge, when this plan of treatment alone was found effectual. M. Jamain, in a paper which he published on the subject in the *Gazette des Hôpitaux*, whilst he accepts the fact, refuses to accept the explanation, which he attributes rather to the erect position so enforced of the head, in exact contradistinction to that usually adopted by patients suffering under an attack of epistaxis, who, leaning over a basin, so

congest the veins of the neck, retard the return of the blood through them, and thereby favour, by the continuance of the hemorrhage, the expulsion of the clot, in this instance, abortively formed for the sealing up of the bleeding point. And if my readers will now refer back to the pathological views that, in a former part of this paper, have already been put forward, they will see that there are much grounds for M. Jamain's explanation of the successful results of this plan of treatment. In the erect position of the head the ethmoidal sinuses being brought into the horizontal position, that most favourable for the spontaneous formation of a coagulum; whilst with the head bent forwards they are in the vertical position, that most favourable for the persistence of the epistaxis, and this, independent of the congested state of the jugular veins, so induced a state of congestion that, no doubt, also tends to keep up the continued flow of blood from the nostril. That the erect position of the head has much to do with the arrest of the epistaxis, experience has long since taught me; I having seen many sharp attacks of congestive epistaxis arrested by the patient leaving the heated atmosphere where it occurred, going out to stand at the hall-door, or some other cool place, with his head held erect, and a handkerchief kept to the nose to prevent the blood soiling the dress; in those instances the position of the head being alone attended to without having recourse to the elevation above it of the arm.

Founded on the same principles of derivation as the dashing of cold water, is the application, in various situations, of the dry cupping glass, of blisters, and of the actual cautery. These, wherever applied, have many advantages; but, in my experience, are attended with the happiest effects when applied to the back of the neck, over the ligamentum nuchæ. Of the two former of these I have had repeated experience; of the latter I have none, so I shall no further allude to it than to state its employment was recommended by Zacutus Lusitanus, who directs it to be applied to the extremities; and that since his time the actual cautery has been applied to the nape of the neck, in some obstinate cases of epistaxis, as stated, with marked benefit. Of the two former plans, however, having frequently had recourse to them with signal advantage, I should wish to speak at some length. And first, then, of the dry cupping glass:—This, if properly applied, is a powerful derivative, but, if improperly, its employment is worse than useless, as occupying, in ineffectual efforts, time that might be far better bestowed in the application of other means for restraining the flow of blood. The way in which

the glass should be employed is as follows:—adapt the size of the glass to that of the nape of your patient's neck, the object being to employ as large a glass as the situation will admit of, and thus to increase the derivative action; but if it be the slightest shade too large it never can be exhausted effectually, and consequently will fail in producing the desired effect. Having, then, selected your glass, plunge it into a basin of boiling hot water, then dry it rapidly with a towel, smear the upper portion of the inside of the glass with spirits of wine—this you do by lightly rubbing it with your fusee dipped in the spirits of wine—now light your fusee, introduce it into the glass, and withdraw it rapidly yet quietly, and apply the glass at once to the desired spot. If these directions be accurately followed, the glass will be effectually exhausted, the exhaustion increasing as the temperature of the previously warmed glass falls; and an ecchymosis will be the result, the marks of which will not disappear for some three or four days. In applying the glass in this way, you must take care only to *moisten* the inside of the glass with the spirits of wine, not to have any of it present in the fluid state, as in this latter case, on introducing the lighted fusee, you set the spirit on fire, and on inverting the glass over the seat to which it is to be applied, you bring the blazing spirit in contact with the skin, and give rise to considerable pain, and, it may be, to a very severe burn. You should also observe a similar amount of precaution in dipping the fusee into the spirits of wine, as, if it be too heavily charged, drops of burning spirit may fall on your patient and produce similar results; when, however, ordinary precautions are observed, this is by far the most effectual way of performing, what is technically called, *dry cupping*, and the operator must indeed be a clumsy one, if, after one or two trials, he prove not as expert as the most experienced professional cupper. This plan of treating passive epistaxis, as old as the time of Galen, by whom it was employed, merits more repeated employment than now-a-days it gains. I am cognizant of its value, and recommend it strongly to the consideration of my professional brethren.

Analogous to this plan of derivation, but slower in their action, is the application of counter-irritants in various situations; for instance, the warm foot bath with mustard in it, as recommended by Chrestien; the application to the extremities of nettles, as advised by the celebrated Borelli, or of blisters to the nape of the neck, as first suggested by Niemann. Of this latter I can speak in terms of the greatest confidence, for some years past having been in the habit of

using them with signal advantage; in which line of practice I was happy to ascertain—in the course of a conversation that I had with him on the subject some short time back—that I am borne out by so able a surgeon as Mr. Fleming, one of the surgeons to the Richmond Hospital; he tells me that his experience fully corroborates mine, and that he has never failed in deriving signal advantage in the treatment of cases of epistaxis from the application of blisters to the nape of the neck; these, to be of use, must be properly made, about two inches wide, four to five inches long, applied along the cervical vertebræ, commencing as close to the occiput as the hair will admit of, and should be kept on at least eight hours.

In some rare cases, where the urgency of the symptoms induced me to think that a more rapid method of vesication would be desirable, I have had recourse to what may be termed instantaneous blistering, by the agency of the strong water of ammonia. The method of applying this is as follows:—A doubled piece of lint is to be folded to the desired size; this is to be placed in a saucer, and some caustic water of ammonia is to be poured on it; when saturated with it, it is to be raised with a dressing forceps, and applied to the nape of the neck. Some dry folded lint, of a larger size, super-imposed on it, and the entire covered with oiled silk; this is to be left there for a few minutes, and on its removal, care is to be taken that the skin be not torn away with it; the result is a blistered surface of the full size and shape of the piece of lint employed. In this way we have produced, in a few minutes, the effect that eight hours' application of the ordinary blister may, after all, fail in producing. The great objection to it is the amount of pain produced by its application. In some cases, however, this is a consideration that may be only of secondary importance.

Of the general remedies these are the most important, and certainly those upon which most dependence is to be placed, but on them alone we cannot rely; those remedies which are applied locally demand some consideration at our hands, and they may be arranged into those of a styptic or astringent character, and such as act more or less mechanically in controlling the flow of blood. In the former class we find every remedy that ever was supposed to be possessed of astringent properties, from those of humblest preten-sions to those that undoubtedly are of acknowledged efficacy. It would but little serve my purpose now to enumerate all that at various times have gained ephemeral reputation; I shall only introduce those that I can recommend with confidence to my

readers' consideration, leaving their selection hereafter to be guided by the circumstances of the case. That which I have found to be of most unvarying value is a powder composed of equal parts of tannic acid, sulphate of alum, and sulphate of zinc. These are separately to be reduced to fine powder, and then mixed as intimately as possible. Of this compound I add about a tea spoonful to a pint of water, and direct the patient to take up in the hollow of his hand what will be contained in it, and to snuff it up into the bleeding nostril, if the blood be issuing but from one nostril, the other being compressed, or into both nostrils, if the blood be issuing from the two. This is to be repeated several times, and during each interval *the head is to be held up erect*, a cloth being provided to catch the blood, and so prevent its soiling the dress. The water will by no means dissolve the amount of the powder here directed, but will *suspend* it, and, if used immediately after rapid gyration, it will fulfil every indication. Many other astringent remedies have been suggested; for instance, any one of these substances separately employed, or acetate of zinc, sulphate of copper, sulphate of iron, pernitrate of iron, perchloride of iron, the double salts of sulphate of iron and alum (as suggested by Sir James Murray), the various vegetable astringents in infusion or decoction, such as logwood, oak bark, matico, nut-galls, &c., or combinations of them with the metallic salts, to suit each several practitioner's taste; but, after sufficient practical experience of each of these, I have found none to excel or even to equal the combination I have previously described.

Some practitioners laud highly Ruspini's styptic, whilst others vaunt Pagliari's hemostatic. Not having ever had occasion to resort to either, I cannot speak of their value from personal experience; the latter of these, from its composition, I suspect to be an energetic styptic; it can easily be prepared as follows:—Boil together eight ounces of tincture of benzoin, one pound of alum, and ten pounds of water, during six hours, in a glazed vessel, replacing the water lost by evaporation with additional hot water, and keep the mixture constantly stirred, then filter; French cotton steeped in this solution should be introduced as far back into the nostrils as possible. Its property of coagulating blood is very remarkable, and warrants our employment of it in extreme cases.

In spite of our best directed exertions, we occasionally meet with cases that will require still further efforts at our hands. I advisedly say " occasionally," for I am of opinion that these cases are but few and far between. If the means already suggested be but diligently

employed the case must be an obstinate one that resists. However, such we occasionally meet, and our consideration must now be directed to the other means at our disposal. These are all, more or less, modifications of *direct pressure*, from the spider's web to the plugging of the posterior nares. Each, one and all, owe their efficacy to mechanical interference with the escape of the blood. Having mentioned it, I may here briefly state that spider's web moistened with vinegar was suggested by Chesnau as a valuable remedy for epistaxis. Later writers have insisted on the existence in the web of hemostatic powers; but I believe that any property of this kind that it possesses is purely mechanical, entangling in its meshes the blood, and thus facilitating its coagulation, whereby a plug is formed to seal up the bleeding point; of course, the vinegar, by its astringency, co-operates in checking the epistaxis.

Plugs of various kinds have been at different times suggested by successive writers, Avicenna, for instance, recommending the anterior nares to be filled up with plugs of dough, or of a paste made with chalk. Morgagni suggests plugs of charpie, moistened with spirits of wine, to be used in a similar manner. Audoin advises strips of carded lint to be pushed as far back as the posterior nares, and the bleeding nostril in this manner to be completely stopped up.

Somewhat analogous to this plan of Audoin is that which Mr. Smyly, the experienced senior surgeon to the Meath Hospital, is in the habit of employing. He having been kind enough to describe it for me, and given me permission to make his communication public, I shall gladly give it in his own words:—

" My dear Macnamara—I have found the following an effectual means of arresting the bleeding in cases of epistaxis; it is easy of accomplishment, and one to which the patient will readily submit.

" The plugging of the posterior nares presents difficulties which deter some practitioners from attempting the operation. It is attended with great annoyance to the patient, not only at the time of its performance, but during the few days the plug has to remain; its removal also is sometimes found to be a troublesome task. No doubt patients will submit even to this to be relieved from impending danger.

" I shall not easily forget a case I was called to see seven miles from town. I arrived in the middle of the night, and found an elderly gentleman lying like a statue, being not allowed to move hand or foot, the windows were wide open, the patient was shivering

with cold, his head, neck, and shoulders drenched, and covered with
wet cloths; he was pallid, yet the blood continued to trickle. On
the nares being plugged the scene was changed from wretchedness
to comfort. To his surprize and delight the patient was changed
to a comfortable bed, and was told he might, with perfect confidence,
compose himself to sleep. I mention this to show the great value
of plugging the nostrils, and its superiority to other treatment.

" The plan I advocate now is to fill the cavity of the nose with
slips of lint introduced from before. I prepare a few slips of lint,
about one foot long and half an inch wide, doubling two inches of
the first slip over the end of a strong director, I pass it along the
floor of the nasal cavity as far as the posterior nares; the rest of the
slip is then packed in, and the extremity, which should be made to
taper, is left projecting out of the nostril for the purpose of its more
easy removal. After this another and another slip is thus intro-
duced, until the cavity is full. The first gentleman I practised
this plan upon was a very witty person, who was much amused at
the process of taking out the slips, which he compared to the
unpacking of a portmanteau; he named each slip as it came out
after an article of dress.

" I was called by a medical man to plug the posterior nares for a
patient of his. When I arrived the bleeding had ceased. The
gentleman would not see me. I explained the above-mentioned
method of proceeding to the medical attendant, who had, in the
night, occasion to put it into practice; he found it easy of accom-
plishment, and perfectly successful in its result.

" Believe me to be yours truly,
" Josiah Smyly."


Desault and Larrey were in the habit of employing a piece of
linen sewed into the shape of a glove, which they pushed through
the anterior nares backwards towards the pharynx; this was then
packed with lint or some such material, and then drawn forwards,
so as to press on the surrounding parts, and thus by direct pressure
seal up the bleeding point. Though Larrey speaks highly of this
procedure, still it presents many and obvious difficulties;—first,
accurately to pack, and secondly, when it has discharged its duty,
to *unpack* it. Mr. Bell improved on this plan by substituting for
the linen bag, a piece of the small intestine of a pig; this fastened
at one end is introduced as far back as the pharynx, and then filled
with fluid or air, and pulled forcibly forwards, so as to act as a

plug. In the 14th volume of the new series of the *Medical Times and Gazette*, p. 493, we find extracted from the *Boston Journal* an improvement on this suggestion of Bell's by Mr. Coate. I reproduce the passage:—" Plugging in Epistaxis.—Dr. Coate employs a very simple contrivance; it consists in a piece of pig's gut, eight inches long, tied at one end, and then turned wrong side out, so that the knot may be on the inside, on a child's silver canula. By this canula it is introduced through the nose to the pharynx, and then blown up, and tied an inch or so outside the nose. He often introduces a spoonful of saturated solution of alum into it. It plugs up both the posterior and anterior nares thoroughly, and to remove it, it must be pricked, and gently twisted or drawn out. Dr. Coate always keeps a yard or two of gut on hand in a bottle of diluted alcohol." Franck also recommends a plan of treatment based on similar principles, and these have been improved upon by M. Martin St. Ange, in his *Rhinobyon*. This has, superadded to a small bladder, a silver canula fitted with a stop cock; the bladder is to be pressed back into the pharynx through the nostril. Through the canula either air or fluid may be passed to dilate the bladder, when the stop cock is turned, and the dilated bladder is then to be drawn forward until it is firmly pressed up into the posterior nares; the anterior are then plugged, and the operation is concluded. To withdraw it, the cock is turned, the fluid or air allowed to escape, and the instrument can be withdrawn, carrying before it all coagula, &c. Those who have employed this plan, speak highly in its favour. Its great merit consists in no interference through the mouth with the pharynx being required, as in the ordinary manner of plugging the posterior nares, which we shall presently describe, a point of no mean importance, as all know who have ever performed this operation, and in the great facility with which it can be effected in the younger periods of life, when our patients are not usually so manageable as in more advanced age.

The method generally pursued in these countries of plugging the posterior nares, is so well understood, that it requires but a very few words of explanation at my hands.; it can be done either with the ordinary No. 10 gum elastic catheter, or with that most ingenious instrument devised for the purpose, by M. Belloc. I shall first describe the steps of the operation as performed with the assistance of the gum elastic catheter, a correct comprehension of which will facilitate my description of Belloc's instrument. Having prepared a plug composed either of folded lint or of a piece of

sponge, about the size and shape of the thumb, it is to be tied firmly in the centre by a piece of sound twine, about 18 inches long, the knot being tied in the middle so as to leave two equal lengths of the twine hanging at either side; you then pass through the eye of the gum elastic catheter, from 15 to 18 inches of stout ligature silk, and pass the catheter almost directly backwards, along the floor of the nares, until it reaches the pharynx; the patient is then directed to open wide the mouth, and with a long dressing forceps *one* end of the silk is caught, and drawn forward out of the mouth, whilst the other, on the withdrawal of the catheter, hangs out of the nose; the portion of silk that is outside the mouth is now firmly attached to one end of the twine that has been tied round the plug, and by pulling on the end of the silk that hangs outside the nose, we draw it also out through the nostril, and are in a position to proceed to place our plug *in situ;* grasping the plug between the index and middle finger of the left hand, we guide it back into the pharynx, and then up into the posterior nares, whilst with the right hand we draw forward the string that appears through the nostril, and pull the plug firmly into the required position; then the anterior nostril is to be plugged, and when that is done the string is to be again pulled firmly to secure the plug tightly in its position, then rolled round a small quill of lint, and secured with sticking plaster in some convenient position about the face. The string that hangs out through the mouth is to be fastened in a similar manner; taking care, however, that it is to hang loosely, in contradistinction to the nasal end, which is to be firmly on the stretch, so as to secure the retention of the plug in the desired position in the posterior nares.

Now, in description, all this seems simple in the extreme, but, in practice, it is anything but simple; a more troublesome proceeding, as this but too frequently proves, exists not amongst the minor operations of surgery. The patient, terrified at the loss of blood, half choked with the rush of blood down the throat ensuing on the position he is compelled to assume to allow the surgeon to catch and draw forward the string, and especially so, if of tender years, becomes unmanageable, and even in the most docile it is not always an easy task to lay hold of the string, situated as it is far back in the pharynx. To obviate this inconvenience, Mr. Belloc has invented an instrument in size and shape resembling a number 7 silver catheter, but of exactly one-half the length. At its extremity it is furnished with an eye, which,

however, is not attached to the body of the catheter, but to a spring
that runs down within the catheter. Along this spring is a stylet,
which can be drawn out so as to double the length of the instrument,
and which, by a screw, can be attached to the end of the spring.
When so arranged, by pressure on that portion of the instrument
that is outside the nostril, the spring is protruded in the pharynx,
carrying with it the eye armed with the ligature; this, in virtue of
the curvature of the spring, presents in the anterior portion of the
mouth, and thus enables the operator with ease to catch the ligature,
and then the subsequent steps of the operation are exactly those
already described. This instrument, with difficulty described, will
be at once understood by the most cursory inspection, and will be
found a most valuable adjunct in performing this troublesome
operation. Still even it requires some dexterity on the part of the
manipulator. In that which I possess the *curve* of the instrument
is too great, and if it be carried too far backwards, the eye, on
pressure, will not come forward on the dorsum of the tongue, but
will, on the contrary, go *down the throat*, and thus complicate
instead of facilitating the operation. We should, in its employment,
not seek to *see* it at the back of the pharynx, but, *when we judge
that it should be thereabouts, press down the button, and we will have
the gratification of seeing the armed eye travelling along the dorsum
of the tongue, and can then readily seize the string that will facilitate
our every other step.*

Having secured the plug in its proper position in the posterior
nares, in the majority of cases of epistaxis, is not alone sufficient to
arrest the hemorrhage, it still will be essential to plug the anterior
nares, for this reason, that it very rarely happens that we can place
the plug on the *exact bleeding point*, and if we fail in so doing, all
that we will have succeeded in effecting is the occlusion of the
passage backwards, leaving that forwards open for the escape of the
blood; if this, though, be also shut up, the effused blood is retained
in the shut sac so formed, coagulates, and becomes itself the plug
by which the further hemorrhage is arrested.

Presuming that the operation has been properly performed, and
so far has proved successful, our next consideration will be, how
long are these plugs to be let to remain? After 24 hours the
anterior ones may be removed, but that in the posterior nares must
not be interfered with *until suppuration becomes well established.*
There are two periods when we will experience difficulty in
removing the plug; when we try to do so at too *early* a period,

before suppuration has been set up, or when we allow them to
remain for too long a time, when we will find, as the result, that
granulations of luxuriant growth will have sprung up, and struck
root into the plug, thus establishing firm connexions between the
foreign body and the Schneiderian membrane, which can only be
severed with considerable difficulty, a proceeding frequently attended
with no trifling hemorrhage. Mr. Smyly, the respected senior surgeon
to the Meath Hospital, informs me that he once saw the late
Professor Macnamara experience considerable difficulty in removing
a plug that had been permitted, by the surgeon who had inserted
it, to remain an undue time without taking steps to remove it.  If,
on the occurrence of suppuration, the surgeon proceed to remove the
plug, its extraction will be accomplished with facility and *safety*, for
now there will be no danger of a recurrence of the epistaxis.

Authors on epistaxis write of this operation for plugging the
posterior nares as if it were one of the most harmless in the entire
range of surgery.   In my opinion it is an operation that only should
be had recourse to under the gravest circumstances, when every
other method of arresting the flow of blood has been put in force
and failed; when, in fact, it becomes a question with the surgeon
whether to have recourse to it, or submit to the loss of his patient.
Why I entertain this opinion I shall now briefly state.  In the first
place, even when most expertly and successfully performed, it is a
proceeding most repugnant to the patient's feelings, and most
incompatible with his comfort; the *malaise* that attends it is very
considerable, the sufferer being, the whole time that the posterior
nares are plugged, compelled to breathe through his mouth, which
enforces an open and consequently a dried up, parched, condition
of that organ: the sensation of the foreign body in this situation is
indescribably unpleasant, so much so that we frequently experience
considerable difficulty in inducing our patients to submit to it for
the necessary length of time.   Still, were this all, I should not
write in such strong terms of disapprobation.   But it is not all.
Mr. Fleming informs me that the late Professor Colles entertained
a very decided objection to this operation, founded on the fact of
his having been called in to see a patient in whom tetanus ensued
on this *trifling* operation, and which this distinguished surgeon
attributed alone to the presence of the plug, acting as a foreign
body, in the posterior nares.   Nor is this the only and most serious
danger; a very slight cause may loosen and detach from its position
the plug in the posterior nares, when it will fall down upon the

epiglottis, and produce almost immediate death. In such an occurrence as this it is that the value of the piece of twine coming out through the patient's mouth will be recognized; in such an event it can at once be seized by a bystander, or by the patient himself, the plug instantly be withdrawn, and the patient thus preserved from certain immediate death. In the article on epistaxis in *Costelloe's Practical Surgery*, I find the able writer deprecating the employment of this string, although, in a subsequent portion of the same article, he alludes to this danger, and gives a case on the authority of M. Martin St. Ange, where a fatal result, consequent on this very accident, occurred in the medical wards of the Hotel Dieu. The late Professor Porter informed me of the occurrence of a similar accident, which terminated fatally, in this city, whilst he was a student: and whilst I myself was serving my time in the Meath Hospital to the late Sir Philip Crampton, I witnessed, in a patient whose posterior nares had been plugged by the late Mr. Rynd, a similar occurrence, when the patient's life was only saved by the greatest promptitude, and where I experienced the greatest difficulty in removing the plug from its perilous situation, *because of the non-presence* of this, in my opinion, most necessary string. The accident, most fortunately, occurred during the late Mr Porter's visit to the ward, when, of course, plenty of assistance was at hand. Had it occurred at any other period of the day, the result, in all probability, would have been far different, as, I need scarcely say, that the patient himself was physically debarred from describing what had occurred. In addition to these grave evils, I have seen erysipelas of the face subsequent to and consequent on the plugging of the anterior nares, and very frequently I have witnessed a most unpleasant ozæna persistent for some weeks after the plugs have been removed. Fortified with such experience, then, is it, that I feel myself justified in asserting, that plugging the posterior nares should be the surgeon's " last appeal."

In the article on epistaxis in *Costelloe's Encyclopedia*, to which I have already referred, I find it stated, on the authority of Blumenbach, that this disease is confined to the human subject. Being aware that such a statement did not invariably hold true, so far as the horse was concerned, I was anxious to ascertain whether, by experience, he could be supported in that statement by gentlemen who had made the diseases of this animal their special study. I therefore addressed some inquiries on the subject to Mr. Doyle of this city, the eminent veterinary surgeon, and received from him

the following interesting letter, which, so far as the horse goes, decides the point:—

"16, Westland-row.

"MY DEAR DOCTOR,—In reply to your question as to the occurrence of epistaxis in the lower class of animals, I have to inform you that I have repeatedly seen it to occur in horses. For example, in Mr. Denis' Albatross running for the Corinthians at the Curragh, a very severe attack of epistaxis occurred, which, with some difficulty, I was fortunate enough to arrest. Running for the Liverpool Steeple Chase she had a second attack, which terminated fatally. Also in a horse the property of Mr. Heathcote, 11th Hussars, epistaxis took place whilst out hunting this season, which proved fatal; and in many other cases also that came under my own observation. I may mention, that plugging the nares with tow steeped in vinegar has proved the most effectual remedy in my hands.—Faithfully yours,

"JOSEPH DOYLE, V.S."

In concluding these observations, it can scarcely be necessary for me to remark that the subsequent treatment of every case of epistaxis will require care and judgment on the part of the practitioner. To enter on this topic, however, would be to open for observation almost the entire range of disease. In the commencement of this paper I have pointed out the varied sources to which it may be traced. These will all require consideration on the part of the surgeon, who should always bear in mind that epistaxis is far more frequently a symptom than a disease, and as such we are bound to search for the " origo mali," and seek then to apply our remedy.

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ART. III.—*Radical Cure of Reducible Hernia.* By REDFERN DAVIES, M.R.C.S., Birmingham.

SINCE October, 1859, I have adopted, almost exclusively, for the radical cure of hernia, the method devised by Mr. Wood, and after finding, from the results of upwards of fifty operations, that it is the most successful and least painful plan known, I most unqualifiedly prefer it.

The way I perform the Operation is as follows:—The patient lying on his back, and his bowels having been that day opened,

chloroform is administered if wished for. An incision, one inch and a-half below the spine of the pubes, is then made for about three-quarters of an inch, the *integument* of the scrotum only being cut through; the lips of the incision are now successively seized hold of, and by a blunt-pointed pair of scissors a dissection is made beneath the integument, for a space of two inches around the external opening of the inguinal canal.

The conjoined tendon is now to be felt for by the finger of the left hand, which pushes before it some fascia. The needle recommended by Mr. Wood is then carried on the finger to the external abdominal ring, through which it is to be passed for a distance of about half an inch, or it is thrust through all the soft parts above. When the point has emerged through the integument, the needle is threaded by a silver wire, and then withdrawn with the wire. The first and most difficult portion of the passing the wire is then accomplished.

The finger now seeks for the external pillar of the ring, and on it the needle, bearing a loop of the wire already introduced (*i. e.*, the wire simply bent on itself), is carried about half an inch within the canal, and all the soft parts above it are transfixed. The extremity of the needle appears on the surface of the abdomen, bearing a loop of wire, and it easily glides down the *free* end of the wire when the loop is held.

And again, upon the finger having found the internal pillar, the needle bearing the wire is carried and made to pierce the tissues above, and a little within the canal. The needle having been disengaged from the wire is lastly withdrawn.

The free extremities of the wire are then passed through an aperture in an oval piece of thickish glass (three inches long by two broad), and the loop through another aperture a quarter of an inch distant, and having been pulled together as close as can be, they are twisted over each other, which securely fastens them.

The testicles having been supported by some tow, and the parts washed, all is done.

During the day of operation some varicocele appears, which depends upon the veins of the cord being pressed upon by the disturbance of the parts and the consequent swelling, and remaining but for a few days, indicates only that the operation has been efficiently done, and requires no notice to be taken of it.

The loss of blood during the operation amounts to about half a tea-spoonful.

The wires may be unfastened on the eighth day, and removed

entirely on the next. The punctures and incision from which some pus will exude, should be treated by water dressing; and when healed (in about one week's time), the patient may be allowed to get up, and is perfectly cured.

The propriety of applying a spica bandage and compress, is now a very much debated point. We know that continued pressure induces absorption, so that it is reasonable to infer that the constant pressure of a spica bandage and compress, will so act upon the recently introduced tissues in the inguinal canal and ring, and that, eventually, there will be produced as bad a state of things as there was before any operation was attempted.

However, practically, such is not the case. In my former operations (those after Wützer's method) I used the bandage with a graduated compress, most extensively, and though not perfectly satisfied with it, I did not find those effects produced, which might have been expected from a theoretical consideration before hand.

Believing, however, that for a time the abdominal walls must be weaker in the inguinal region than elsewhere, and that concussions had better be guarded against, I now use a simple bandage, and by this means, cover in firmly the whole of the lower half of the abdomen.
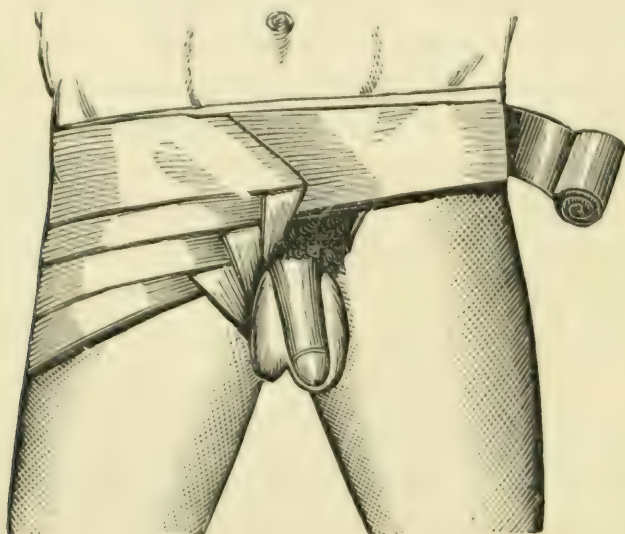


The rationale upon which this operation acts, is, I believe, as follows:—A portion of fascia having been freed from its adjacent parts is, by means of the wire, fixed in the canal and rings, so as

to form a plug which prevents the gut, &c., from escaping out of the abdomen. By this means, it acts in just the same way as Wützer's operation does; and the only difference between them is that, in Wützer's, union is attempted between two tissues which were not intended by nature to unite; and in Wood's, parts are united (and that subcutaneously) which are accustomed to be so, naturally. Again, the rings, &c., instead of being forcibly distended, as in Wützer's method, are made of less size, by having their pillars, &c., drawn firmly together; and kept so, by becoming united with the fascia drawn into them.

Wood's operation may be looked upon as simply gliding into another place, tissues which have a natural affinity one for another; and by this means, causing a canal, &c., which has become distended by pressure, to recover its natural calibre.

The reasons that have led me to prefer this operation, &c., to Wützer's, even with the improved instrument I have invented, are:—Firstly, its immense superiority, as founded upon the practical observation of more than fifty cases upon which I have operated in this way. Secondly, by the consideration, that a wooden plug (even with the addition of a movable lower portion), can never adapt itself to the tissues like soft parts. And thirdly, that there is, and must be, great difficulty in inducing two surfaces to unite one with another, which were never intended to do so by nature, viz., the causing two layers of invaginated scrotal integument to adhere together.

The improved instrument above alluded to, I have already described elsewhere; but I now again figure and describe it. Where Wützer's operation is adopted, in cases of scrotal and femoral hernia, with the tissues relaxed and the rings of large size—say capable of admitting two, three, or more fingers—considerable difficulty and disappointment is experienced in endeavouring to effect a cure by one operation; and it has occasionally happened to others, and to myself, to be obliged to repeat the process.

From practical acquaintance with the subject on the living, and repeated trials and experiments upon the bodies of the dead, who have been affected with hernia, I have been led to believe, that the cause of such failures is not attributable to any fault in the theory of the method, but to a defect in the instrument; and upon the following grounds, submit to the decision of practical test, that they would be obviated by the adoption of the accompanying mechanical improvements.

Upon examining a case of rupture in which the operation for the radical cure has failed (supposing, of course, that it has been properly managed, together with the proper after-treatment), the rings and the canal will be found to be obliterated, probably to some three-fourths of their extent, or there may be only an aperture which will, with difficulty, admit a crow's quill; and thus, though the patient may be greatly benefitted, and with the aid of a truss, resume his duties, a *radical cure* has not been effected.

That portion of the canal and rings which have been blocked up, is invariably, that which is nearest the abdominal walls. "The gut slips down behind the plug," are the terms in which, both surgeons and patients express the mishap which has occurred, and the reasons for this are, I believe, as follows:—The anterior or superior layer of the invaginated integument, is subjected to, not only the pressure of the wooden plug in Wützer's instrument, to keep it in apposition with the opposed surface of the canal and rings, but also to the direct pressure of the compressor. The compressor exerts its influence exclusively upon the parts included between it and the upper surface of the said wooden plug, and in no wise affects the posterior parts:—viz., the posterior layer of invaginated integument, and upper surface of the canal and ring, whose sole chance of being kept in apposition depends upon the accuracy with which the plug fits the canal, &c., as a whole.

The floor of the canal, &c., especially where the tissues are lax, as generally occurs in old and large ruptures, does not present in the same manner an opposing resistance to the wooden plug as does the compressor; and thus, should the two former be not very accurately adapted the one to the other, adhesion cannot even be expected to occur.

The mouth or internal opening of the canal, is funnel-shaped, with the posterior surface the more sloped; consequently, if there be a weak point it will be there, and it is sure to receive all the shocks of the gut during the process of cure.

Besides, it is evident that a *cylinder*, even closely applied to the rest of the extent of the canal, cannot fill up its funnel-shaped mouth; but must have an interspace which will be on the posterior surface.

And again, it is not always practicable to introduce to a sufficient extent, a solid plug, which would best fit the internal ring, on account of the resistance of the other tissues to its passage; besides entailing an endless variety of such plugs.

By the adoption, however, of the principle I now propose, viz.,
a plug, whose lower half is capable of expanding, those difficulties
are severally overcome.



SALT. BULL STREET.
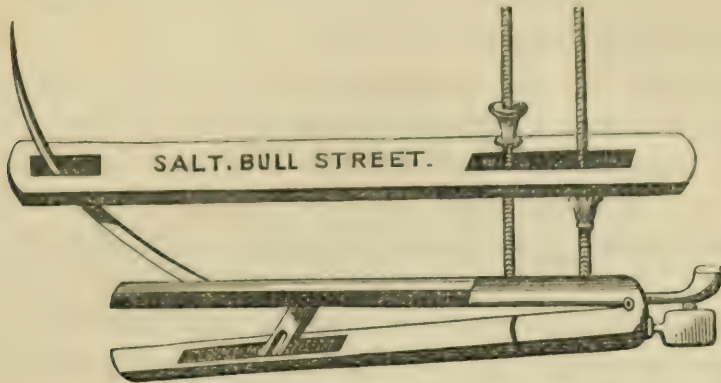
A glance at the diagram will render its application at once
evident; it will be seen by turning the handle of the dilating
screw, and thus causing the lower half of the instrument to expand,
that the pressure upon the parts included between the upper por-
tion of the plug and the compressor, is left in exactly the same
relations and conditions as in the usual instrument; but, that a
force is exerted upon the posterior portion of the invaginated inte-
gument, canal, and rings, which it gently, but firmly, retains in
complete apposition one with the other.

By reason of the greatest point of its expansion being at the
extremity of the instrument and gradually tapering, two objects are
accomplished; first, the funnel-shaped mouth and the internal open-
ing is filled with a plug, whose sides are inclined towards its own—
the invaginated integument being, as it were, modelled upon it;
and secondly, the rest of the canal is, at the same time, subjected to
no undue pressure.

The principle adopted by Mr. Spencer Wells, is likewise, made
available, viz., having the transverse diameter of the instrument
much greater than the antero posterior, whereby the shape of the
ring is altered, it being converted into a mere chink, and thus
affording an additional security against the descent of the gut; and
so leaving as small an amount of space as possible between the
opposed surfaces of the *doigt de gant* to fill up when the instrument
is removed. A thin India-rubber finger-stall caps the end of the
instrument preventing any soft parts getting between the blades.

With regard to the metallic uprights and screws, they are so

arranged that the amount of pressure exercised by the compressor, may be applied just as is required; an excess may be precisely thrown, when desired, upon the part pierced by the needle, or upon the edge of the *cul-de-sac*, by alternating the screws; or a general and equal pressure may be exercised upon all the parts included between the compressor and the plug.

With regard to the permanency of the cure effected:—The first case I did, and which is reported in the *Medical Times*, June 12, 1858, remains still well on one side, and has done so ever since he was operated upon, then being received into the police force. Several men have entered the army; and I always ask people upon whom I have operated, how they are when I see them again (which in a workhouse practice—tramps, &c.—was very frequent), and I am invariably told, that their cases still remain perfect. Some few cases, however, I know of as having relapsed.

I have operated, by the subcutaneous method, upon upwards of fifty cases, and have failed to *cure* but five cases. In one of these the person, who was not of strong mind, made, at the time of with-drawing the wire, such a struggling and disturbance, from fear that he should be hurt, that, as I told him at the time, the operation was a failure, for, by his movements he forced the gut down. In the other cases I know of no probable solution to account for the failure. In one case where the rings, &c., admitted three fingers breadth-ways, a second operation was found necessary.

I have never seen the least danger or pain in any one case, consequent upon the operation. In some hard-lived men, bronchitis and flatulence, chiefly the result of assuming the recumbent posture, came on, and were easily relieved by the ordinary medicines.

From frequent and careful dissection of the parts, I had been induced to believe that the peritoneum is not touched in this operation; and the same opinion has been verified by a *post mortem* examination of the parts, some four months after the cure had been effected—the patient dying from fever.

In one case, occurring in the practice of Mr. Harding, of Stourbridge, upon whom I operated, the patient having refused chloroform, became so unruly during the operation, that he seized my hands several times whilst I was passing the needle; upon being told that if he did so again I should be compelled to leave, he became rather quiet and did not again seize my hands. In the night of the same day, Mr. Harding was sent for to him, and found him labouring under an acute attack of peritonitis; he instantly

took off everything; and in the morning sent me word—upon arriving at the house I found he had died. No *post mortem* examination was allowed.

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ART. IV.—*Complete Resection or Extirpation of the Astragalus.* By DR. OSCAR HEYFELDER, of St. Petersburg.

SINCE I published my book treating the resections of bones and articulations, two cases of extirpation of the astragalus occurred to me which I think worth communicating.

CASE I.—Ivan Terasimof, 30 years old, coachman, received a semi-luxation of the astragalus by a heavy butt falling upon the back of the extended and fixed right foot. No wound of the skin, but a very considerable swelling of the ankle. Received into the hospital for workmen: the inflammation and swelling yielded to an antiphlogistic treatment; but the skin of the back of the foot where it was over-extended by the luxated astragalus, became gangrenous, and the foot remained in the position of extension, the ankle joint being incapable of any movement. After some weeks, not only this state remained, but a fistula had formed itself on the inside of the foot, corresponding to the anterior and exterior parts of the astragalus, where a probe might be introduced into the softened osseous tissue, and easily made to penetrate even to the skin at the exterior side of the foot. The dislocation of the astragalus being an irreducible one, and the osseous tissue being even carious, I proposed the extirpation of the dislocated bone; the more so as this operation, in 63 previously recorded cases, had given very good success.

The 28th of September, 1860, I proceeded to the operation. A curved incision, the convexity towards the toes, divided only the skin, and permitted me to separate the skin from the subjacent tissue, to separate the well conserved extensor tendons, and put them aside. The dislocated astragalus being pressed into the tissue of the cuboid bone, and firmly retained by the posterior and inferior ligaments, it could not be removed but with much difficulty, and by dividing the tendons of the extensor digitorum longus. The astragalus being extirpated, and the morbid parts of the cuboid being removed by help of a gouge, I joined the wound with silver sutures, fixed the foot upon a splint, and laid it in a warm water bath.

30th September.—The pains of the wound very tolerable in comparison with what he had suffered before. Suppuration good; the whole state very satisfactory. On the 8th October the sutures were removed, and almost the whole incision found closed by the first intention. The movement of the toes very easy, and not at all painful. In this, as in other cases, the *secondary operation*, in comparison with primary ones, has proved preferable, by the slight degree of reaction, and, in general, by the easiness with which this was supported.

When the permanent bath ceased to be agreeable to the patient (about the 14th day), the limb was put in a dry bandage, and, from time to time, movements were undertaken. He received a corroborating diet, and went on pretty well; when, three weeks after the operation, the foot was taken with erysipelas, which is almost endemic in that hospital.

A fortnight after his restitution, when the movement of the toes, and even of the ankle joint, had been established, hospital gangrene broke out in the wards, with which he was very dangerously affected. Our usual remedy, cataplasms of grated carrots, and the internal use of decoction of cinchona with aromatic tincture and acids, restored the man, after that even amputation had been taken into consideration. From the seventh week the convalescence went on without further interruption. Active and passive movements took place every day; and with the beginning of December the first essays of walking could be made without much pain or difficulty. The 26th December the man left the hospital, quite restored to health, his foot being cured. The wounds closed; position and movement normal; no deformity; the shortening of the limb 1½cm. (six-tenths of an English inch); the sole something flat; the back of the foot of a quite normal form; sensibility, temperature, and the colour of the skin like that of the other foot.

CASE II.—Ludwig Susemuhl, 14 years old, baker, of a delicate complexion, fell, in the beginning of the month of October, 1860, and got a distortio in articulo pedis, whose consequences had not yet quite disappeared, when he fell a second time, and hurt the same ankle joint in a very painful way. When he entered the hospital for workmen, on the 10th November, we found an irreducible dislocation, a considerable swelling of the foot, great painfulness, which increased by touching or movement; inability to walk. Twenty leeches, and fomentations with aqua saturnina could only

allay the pains and inflammation, but not change the general state of the foot; nor could the local application of unguents, and the internal employment of nitrate of soda cure the symptoms of a local chronic inflammation and a general state of fever. Abscesses, which formed on the inner side of the ankle joint during the month of December, were opened, and gave issue to a laudable pus. They corresponded to a rough, carious, and softened part of the astragalus. The whole bone proving carious, and the neighbouring bones being intact, I proceeded, on the 28th December, to the removal of the diseased astragalus. As I believe it of great importance in all resections that the wound of the skin should coincide as little as possible with the defect in the bones (the former should be as far as possible from the latter), I made a real gaiter-like incision (like that of Baudens for the exarticulation of the ankle joint). Continuing, as in the former case, and finding the bone not as firmly attached, I succeeded in keeping sound all the extensor tendons, and in removing the bone in two halves. The tendons being isolated, and kept aside, I introduced the chain-saw, and divided the astragalus in an oblique line. No blood vessel being to tie, I adopted the same bandage and treatment as in the former case. The local success being almost as good as after the first operation, the symptoms of tuberculosis pulmonum et intestinorum showed themselves more and more; the wound got gangrenous; and in the end of January he died with phthisis generalis. The *post mortem* examination proved lungs and bowels covered with tuberculous deposits, and the wound of the foot filled with unhealthy pus, notwithstanding its partial reunion.

If we add these two cases to the rest, the operation has been done in 78 cases, since the year 1670, when Fabricius Hildanus performed it for the first time. After him it has been executed by Broglie, Aubray, Ferrand, Desault (five times), Manduyt, Laumonier, Rumsey, Trye, Hey, Charley, Daniel, Percy, Roux, Dupuytren (four times), Evans, Green, Lynn, A. Cooper (twice), West, Stevens, Follot, Nowood, Cloquet, Arnott, Thierry, Norris, Heidenreich, Hinterberger, Rognetta, Dietz, Quetalet, Velpeau (twice), Robert, Wackley, Chabanon, Thore, Letenneur (twice), Statham, Estevenet, Hancock, Addenbrock, Smith (eight times), T. F. Heyfelder (twice), Chassaignac (twice), Gisborne, Husband, and the Author (twice). Partial resections have been made by Moreau (the father), Duverney, Rattley, Champion, and another English surgeon whose name I do not know. So that five out of

78 were partial—73 total ; 11 of the 78 operated on died, 67 lived.
Of this 67 operated on, whose lives were preserved, two were after-
wards subjected to amputation—one for deformity and uselessness
of the member; 65 were fully restored. The fatal cases form, con-
sequently, one-seventh, the unsuccessful ones one-sixth of the total
number.

Ankylosis of the ankle joint is not at all, as Boyer pretends, the
necessary consequence of the operation; as, out of the 67 successful
cases (which generally are not even extensively enough commu-
nicated) I found 10 in which the movableness of the foot, or even
the formation of a new articulation was established and expressly
named. Ankylosis may, of course, take place by very acute
inflammation, by want of passive and active movements, or by
retraction of extensive cicatrisation, as it happened in one of Chas-
saignac's cases.

The indications for this operation are exceptionally caries or
necrosis; usually traumatic injuries (69 times out of 78), these
may be gunshot wounds, or fractures, or complicated luxations; the
latter are the most frequent cause for the extirpation or resection of
the astragalus; 68 out of 78 cases were operated on for this reason.
Not only luxations complicated with fracture (twice out of 68 times),
with wounds, with secondary disease of the bone, but even fresh and
simple luxations, which cannot at all, or not without much difficulty
and power be reduced, should rather indicate the partial or total
resection, as Dupuytren (*Annuaire Méd. His. des Hôp. de Paris*,
1819, p. 28) did in one case with full success. On the contrary, I
believe that in my second case, and in one observed by Professor
Bruns (*Deutsche Klinik*, 1857, pp. 479, 480), where the man died
without having been operated on, an early resection of the astra-
galus might have saved the life.

Art. V.—*An Essay upon the Malformations and Congenital Diseases of the Organs of Sight.* By W. R. Wilde, M.D., V.P.R.I.A., F.R.C.S., Surgeon to St. Mark's Ophthalmic Hospital, Honorary Member of the Medical Society of Stockholm, &c., &c. With Illustrations. Part IV.

### MALFORMATIONS OF THE VITREOUS BODY, RETINA, AND OPTIC NERVE.

HAVING already described the formative process in the human eye, it is unnecessary to enter at any length upon the peculiarities in the mode of growth in the retina. Within the last two years V. Ammon published a memoir on the Embryology of the Eye, in the *Archiv für Opthalmologie,*[a] in which he says the retina appears, in the fourth or fifth week, as a white downy membrane in contact with the lens, open behind and on one side. In some very rare cases of development this retinal fissure remains permanent, an instance of which is given by that author in his previously published work, the *Klinische Darstellungen der Angebornen Krankheiten,* Bd. iii., Taf. xi., Fig. xv. From the middle of the third to the middle of the fourth month, the retina resembles brain—white and thick, and filling up the space between the choroid membrane and vitreous body. About that period a ridge or projection, like the pecten in birds, passes in through the slit in the retina to a sulcus in the vitreous structure; but this in time is absorbed. During the fourth and fifth month, convolutions like those seen on the surface of the brain are observed on the retina, and are not altogether lost till the eighth month. A few of these folds may, in some cases, be seen in the site of the fissure, even up to the ninth month; and V. Ammon says that the persistence of this embryonic condition, in the slightest degree, impairs vision. In the second month, nerve-cells and granules are recognisable, and in the third and beginning of the fourth the ora serrata is discernible; but the optic nerves do not appear till about the end of the third month. When the brain and eye-cells, originally in contact and communication, become separated by the orbital plate of the frontal bone, the optic nerve is developed in the form of a fissure or gutter, which is afterwards

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[a] See review thereof in the August number of this Journal, vol. xxxii., p. 127.

closed along its length, and filled with nerve matter. The retina and optic nerve are joined towards the end of the third month; and in the fifth, the arteria centralis, which has been formed very early in fœtal life, dwindles. Any interference with the foregoing process must result in malformation, or congenital disease.

Besides the cases mentioned above, dissections have been given of club-shaped retinæ, each of which presented a pyriform mass, lying between the ocular end of the optic nerve and the lens. In other instances, it is said that there was over-constriction of the optic nerve at the cribriform plate.

In cases of microphthalmos, and other manifest alterations and arrests of development in the eye, there is generally evidence of deficiency of formation in the vitreous body or retina, but careful dissections of such have been rarely recorded.

## CYCLOPIA.

Monstrosities in which there is but one apparent eye are not unusual in the human subject, and are also seen in the lower animals, especially lambs, kittens, and calves. In nearly every instance the fœtus is acephalous. Where only one eye exists, but retains its natural position, the case may be termed monoculus; and where the eye is misplaced, it may be called a cyclops. In this latter condition, although there is apparently but one eye, it consists of two globes fused together, and there are either three or four eyelids.

From Dr. Mayne's able article on the Optic Nerves, in *Todd's Cyclopædia of Anatomy and Physiology*, I extract the following passages :—

" A single eye placed in the middle line of the forehead, and in general a trunk or proboscis growing immediately above this solitary organ of vision, constitute the most striking apparent anomalies in monsters of this class. The fundamental defect in these monstrous fœtuses consists in the total absence of the organ of smell, in consequence of which deficiency the symmetrical organs at either side become united in the middle line, and actually engrafted upon each other; the two eyes are conjoined so as to form but a single organ of vision, and the very same metamorphosis occurs in the two orbits the two optic foramina, the two optic nerves, &c. That this is the rationale can scarcely admit of a doubt, since in some parts of the organs the fusion remains incomplete; thus two crystalline lenses

still exist in the interior of the solitary eye-ball; a double set of muscles, with their corresponding nerves, are provided for the globe of the eye; and four eye-lids protect the organ in front, causing the aperture of the lids to assume a quadrangular form."

One of the most remarkable instances of monoculus, or a single eye in its normal position, occurred in the Dublin Lying-in Hospital, about fifteen years ago, and from the recent specimen of which case I had the accompanying illustration made. The fœtus had nearly
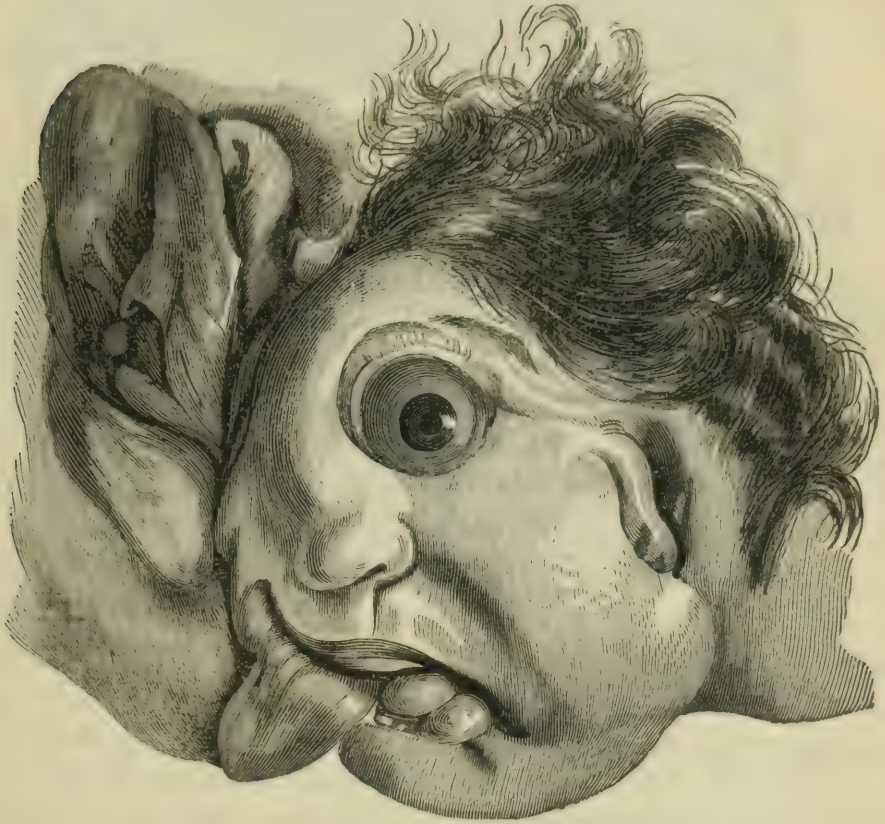


arrived at the full period; one side of the head and a large portion of the face were deficient, and the parts were there attached to the shoulder, as shown in the engraving. The preparation still exists in the Museum of the Lying-in Hospital.

## PLURALITY OF EYES.

This peculiar form of malformation, to which may be given the name of polyoculi has not heretofore been mentioned by authors. The accompanying illustration, from a drawing which I had made many years ago, of a four-eyed monster, which occurred in the

Dublin Lying-in Hospital, affords an example of this very rare malformation. This child was in other respects well formed; but



the upper portion of the head and face was double, all the parts below the nostrils being fused into one.

Vrolik, of Amsterdam, who paid much attention to the subject of Cyclopia, in 1834 and 1836, has divided this form of congenital malformation into five varieties:—1. Where the eye or eyes are not visible externally; in which there is a single orbit, with a slit between some folds of skin, marking the site of the eyelids; the orbital portion of the frontal bone generally absent, and no optic nerves. 2. A single eye, visible externally. 3. A single sclerotic, containing one or more of the internal parts in duplicate. With this variety there is generally a snout-like nose. 4. The division into two globes is more distinct than in the former case. 5. The eyes are double, partially or completely, but divided by a septum, and there is a proboscis-like nose.

The state of the eyelids, from a mere slit to that of a triangle, and finally a lozenge-shaped opening, depends upon the foregoing

condition of the globe. It is manifest that the fusion of the eyes in cyclopia is a pathological condition consequent on an arrest of development in other and adjacent parts; and the state of the choroid and other internal structures depends on the greater or less amount of fusion of the corneæ and sclerotics.

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Art. VI.—*On Carbonic Acid in Mineral Waters.* By Julius Althaus, M.D., Member of the Royal College of Physicians of London, &c.

One of the most important and interesting constituents of mineral waters is carbonic acid, the " spirit of the springs," which not only greatly contributes to the solubility of certain salts contained in such waters, but also renders them more palatable and more agreeable to the stomach. It is especially important for chalybeate waters, which, when devoid of carbonic acid, soon lose the iron which was in solution, and also become heavy and unpalatable. There are some very strong chalybeates in England, as, for instance, the springs of Sandrock, in the Isle of Wight, those of Dorton, in Oxfordshire, and those of Tunbridge, which, if they only contained carbonic acid gas, would no doubt attract a large number of patients from this and other countries, who now resort to the waters of Spa, Driburg, Pyrmont, Schwalbach, and other continental places. The strongest chalybeate known in the whole world is the Aqua Ferrata di Rio, in the island of Elba; but as it does not contain any carbonic acid, it is entirely useless for medical purposes.

In mineral waters, carbonic acid is found in three different states. It is either " *bound*" to certain bases, with which it forms carbonates; from these the gas does *not* escape, when the water is heated; or it is " *half-bound*," forming sesquicarbonates and bicarbonates, from which compounds part of the gas is disengaged as soon as the water comes in contact with the air, and still more rapidly when it is heated; so that, since certain salts are only soluble as bicarbonates, and insoluble as carbonates, they are precipitated as soon as the surplus atoms of carbonic acid are gone; finally, it is contained in the waters *free*, as gas, which escapes at the ordinary temperature, as soon as the water rises out of the earth, and the pressure under which it was in the interior ceases. This escape is more rapid and powerful when the water is hot or artificially heated. Carbonic

acid is found almost entirely pure in the neighbourhood of the Lake of Laach, in Meinberg, and Driburg, while in other places it is found mixed with nitrogen, sulphuretted hydrogen, and oxygen.

The tension with which the gas escapes, shows considerable variations in the several mineral waters. Where there are many outlets for it in a certain locality the tension is, generally speaking, not considerable; but if borings are made in places where there has been no previous exit of gas, the pressure is sometimes so powerful, that as soon as an opening is made, it rises twenty or thirty feet into the air, carrying with it large stones from the boring hole. This has often been observed in boring for artesian wells. The same is the case, if the escape of the gas is accidentally or intentionally impeded. Thus, some time ago, the tube connected with the acidulated spring at Pyrmont, had become obstructed, whereupon the gas heaved up not only the large metal funnel, which, at its upper end, is eight feet in diameter, but also the whole cottage that had been built over it.

The quantity of carbonic acid contained in the spas is very variable. It is well known, that common spring water contains a certain amount of carbonic acid (from one-sixth to one-fourth of a cubic inch in the pound). River water is also slightly impregnated with this gas, and a little more of it is found in sea-water than in fresh water. The small quantity contained in drinking water is sufficient to impart to it a refreshing taste, which no water has that is quite devoid of carbonic acid  But the amount of this gas contained in springs, rivers and the sea, is very trifling when compared with the quantity found in certain spas. It varies from one to seventy cubic inches in the pound, and such waters as contain ten cubic inches or more are called acidulated springs.

The amount of carbonic acid found in mineral waters is dependent upon several conditions, of which the chief are, hydrostatic pressure, and temperature. According to Lersch, one ounce of water at a temperature of from about 40° to 60° Fahrenheit, absorbs at the ordinary pressure of air, one grain of carbonic acid. If the pressure increases, more gas is absorbed, but not in the same ratio, as by a pressure equivalent to seven atmospheres, not seven, but only five times the ordinary amount of gas is dissolved. As soon as this pressure ceases, gas-bubbles are set free from the mineral spring, in the same way as on opening a bottle of Champagne.

The escape of carbonic acid from the springs, is considerably influenced by the variations of atmospheric pressure. When the

barometer rises, less gas is set free; but if it falls, as, for instance, before a storm, the amount of gas evolved is very large, the bubbles rise more rapidly, the surface of the springs appears more agitated than usual, the water has a more refreshing taste, and, where baths of this gas are given, the bathers find it impossible to bear the powerful effects of it; a circumstance which has been more especially noticed by M. Bertrand, in the gas-baths of the Auvergne. The carbonic acid discharged by the Racoczi of Kissingen, varies, according to the atmospheric pressure, from 110 to 170 cubic inches of gas in a minute. These gas springs may, therefore, serve as indicators of an impending change in the weather, and only seldom deceive the observer. In consequence of a diminished amount of gas in some springs, oxide of iron, which is only kept in solution by carbonic acid, is precipitated, and imparts to the water a red colour, which mostly indicates the approach of heavy rains. It is from such and similar natural phenomena that weather-wise persons draw their prophecies.

The *temperature* of the water has also an important bearing upon the amount of carbonic acid contained in it. The capability of water to absorb carbonic acid, decreases in an inverse proportion to its temperature. Accurate calculations have shown, that 1,000 volumes of water will, when heated from 40° to boiling point, expand to 1,043 volumes, while 1,095 volumes of carbonic acid, which are absorbed by 1,000 volumes of water, expand to 1,417 volumes; therefore, if acidulated water is heated, the gas expands much more largely than the water, and for this reason alone part of it must escape. But there are other influences at work, which carry off a still larger quantity of gas from heated water, namely, the diminution of affinity which exists between hot water and other gases, but its own; the more steam there is present in water, the less of foreign gases can be kept in solution; besides, the steam bubbles, which rise from water when heated, mechanically carry the carbonic acid away with them. At boiling point carbonic acid is entirely expelled, as are in fact all foreign gases; but gentle heat is not sufficient to drive the gas entirely out. Thus water used for bathing, at a temperature of 86° to 88° Fahrenheit, may still be so much saturated with the gas, that, if the patients enter the tubs, the whole surface of the body becomes thickly covered with bubbles of carbonic acid, and if wiped off they immediately re-appear. A low temperature enables the springs to retain a large quantity of carbonic acid, and; consequently, to keep in solution a comparatively larger

quantity of the carbonate of lime and magnesia, oxide of iron, and other substances which are insoluble in the absence of this gas. If the latter escapes, the salts just named are at once precipitated.

The more or less intimate connexion of carbonic acid with certain mineral waters, has been the subject of much mystical misrepresentation. Thus it was observed that the gas is more loosely bound to the acidulated springs of Silesia than to those of Pyrmont, Spa, Seltzers, and Driburg; that the gas seemed only to travel through some of the springs, while others were very firmly impregnated with it; and such and similar observations were adduced to prove that physical laws were not sufficient for explaining the wonderful phenomena connected with the "spirit of the springs." But if we analyse the actual state of things, it is not difficult to account for it in a scientific manner. Thus, for instance, we should naturally expect that the water of Reinerz, in Silesia, would lose its carbonic acid sooner than that of Driburg, in Westphalia, as the former has a temperature of 66°, and the latter of 51° only. But it is true that the temperature and pressure are not in all cases sufficient to account for the more or less intimate connexion of carbonic acid with water; in such instances, however, we can always trace other physical or chemical influences at work. Thus, if water saturated with a certain gas, comes in contact with other gases which it does not yet contain, it will dissolve a certain amount of these latter; but, with the loss of a certain quantity of the former. If water, which, when rising from the earth, contains no other gas than carbonic acid, comes in contact with the atmosphere, it at once absorbs nitrogen and oxygen, whereby carbonic acid is driven out; but when water is already impregnated with nitrogen and oxygen, before it rises, carbonic acid will be the more firmly bound to it. Finally, we have to consider that water keeps gases less easily in solution, in proportion to the increase of its own specific gravity. Carbonic acid, therefore, escapes more rapidly from strongly concentrated saline waters than from such as contain only a small quantity of solid ingredients. If these circumstances are borne in mind, we shall almost always be able to explain the relations of carbonic acid to water, and may, in fact, often determine, *à priori*, whether a certain spa is likely to contain much or little of this gas. Thus, for instance, the brines and bitter waters which contain from 80 to 2,000 grains of salines in the pound of water, will not contain much carbonic acid; the bitter water of Friedrichshall, in which 193 grains of salines are dissolved, does not contain any carbonic acid.

Thermal springs will also contain very little of it, on account of their high temperature, while such waters as are rather cold and contain only a moderate quantity of salines, present the most favourable conditions for absorbing a large amount of this gas, and keeping it in solution for a considerable time. In some spas it is contained in such large quantities that it constitutes their chief element; while in others carbonic acid is not the characteristic feature of the water, although it essentially modifies the composition and the effects of the same.

The sources from which mineral waters derive carbonic acid are of various kinds, and where they are abundant, waters which have a high specific gravity and a comparatively high temperature may contain more gas than others of, perhaps, less gravity and temperature, but which are in a neighbourhood where the sources of it are sparing. Small quantities of carbonic acid are absorbed by the springs from the upper strata of the earth, which attract it from the atmosphere, and in which it also accumulates by putrefaction of organic bodies. Fossil remains of plants contain a large amount of carbonaceous matter; and if water runs through such strata their substance is decomposed by the oxygen, which is always present in it; and thus carbonic acid is formed, which is then generally found together with sulphuretted hydrogen. That free oxygen is lost in this way, and oxygenation of carbon takes place, is evidenced by the circumstance that common spring water contains less oxygen than rain water (respectively 16 and 7 volumes of it in 1,000 volumes of water).

But the sources of carbonic acid I have just enumerated only hold good for a limited number of acidulated springs, most of which are, no doubt, connected with active or extinct volcanoes. Exhalations of carbonic acid, either in its free state as gas or united with water, are generally the last remnants of Plutonic catastrophes. The carbonic acid can at present only rise where disruptions of the crust of the earth exist, and its upper strata do not offer an impediment to the exit of the gas. Such rents we find, for instance, in Germany, at Pyrmont, where the well-known Grotto of Dogs is filled with pure carbonic acid; and powerfully acidulated chalybeate springs issue from the fissures in perpendicular layers of sandstone. Carbonic acid also rises from the basalt formation which we find extending through Germany from the Eifel to the Riesengebirge. In the neighbourhood of the Lake of Laach there are more than a thousand acidulated springs close to each other. In some of them

the bubbles which escape from the water are as large as the head of an adult, and a noise as of hissing, whizzing, and gurgling is heard at a great distance. Within a few miles of Marienbad we find 124 acidulated springs, and the quantity of carbonic acid developed in them is something prodigious. From an approximative calculation the springs of Meinberg furnish about one million of cubic feet annually, and those of Nauheim eleven millions. In France we have exhalations of carbonic acid in the cave of Montjoly, in the Auvergne, and the Puits de Nérac, in the Vivarais. In Italy we find the gas-springs of Sciacca and Latera, at the foot of the Etna; the famous Grotto del Cane near Vesuvius; the Lake of Amsanctus, near Naples, in which the carbonic acid is mixed with sulphuretted hydrogen; and the Guada Mortale, in the neighbourhood of that lake, which contains pure carbonic acid, and where sheep, hares, and rabbits are often found suffocated. In Greece there were and are still many places where escapes of this gas occur; such was the steaming cave in Apollo's Oracle at Delphi, where the Pythia pronounced her prophecies, and of which no remains are left; also the gas-springs in the sacred forest of Dodona, near Epirus, the most ancient oracle of the Greeks; the springs of Thermopylæ, and many others. The phenomena observed in such places are so remarkable that we cannot be surprised at finding an uneducated age and people looking upon them as manifestations of supernatural powers. In fact, the hissing and gurgling sounds, occasioned by the discharge of the gas, were, by the ancients, believed to be the voices of demons. It was in places like those just mentioned, which were called the " spiracula Orci," that, according to Homer and Virgil, Odysseus and Æneas went to the lower world to meet the spirits of the departed; that oracles were founded which were used by a cunning priesthood to deceive the vulgar; and it was into the awful lake of Amsanctus that, according to Virgil, the fury Alecto, in her anger, precipitated herself from the summit of the mountain.

Volcanic agency does not, however, *produce* carbonic acid; it merely provides it with an outlet, tearing asunder the crust of the earth, and taking away the obstruction to the free escape of the gas from the interior of the globe. The most abundant source of carbonic acid is, no doubt, the decomposition of carbonates, such as the carbonate of lime, of iron, of magnesia, which enter into the composition of the solid crust of the earth. The common limestone alone exists in such quantities in it as to be able to give out inexhaustible

streams of carbonic acid from every point of the earth's surface, of which this salt, together with silica, forms the greatest part; its geognostical distribution extending from the newest tertiary deposit to the oldest primitive rocks. From its combination with lime, carbonic acid is evolved partly by sulphuric and hydrochloric acids, which exist in the interior of the earth, sulphate and chloride of lime being thus formed; and partly by a simple process of calcination which is continually carried on at a certain depth, in consequence of the heat inherent to the interior. Berzelius believed that the action of the heat, and, therefore, a continued evolution of carbonic acid from limestone, ceased at the depth of two or three fathoms from the surface, in consequence of the very bad conducting power of the stone. But Bischof has proved that if limestone is exposed to a high degree of heat it cannot retain its cohesion and firmness; in fact, under such circumstances, the rock soon cracks in every direction, is disintegrated into fragments, and thereby affords ample room for the continued influence of the heat, which is, of course, assisted by the presence of a large amount of aqueous vapours. This is, only on a larger scale, the very same process which we may every day observe in our artificial lime-works.

In a subsequent communication I intend entering into the physiological effects and the therapeutical action of carbonic acid, both as gas and when dissolved in water.

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Art. VII.—*Observations on Encysted Tumours.* By Henley Thorp, M.D., F.R.C.S.I., L.K. & Q.C.P.I., Letterkenny.

During the last ten years I have been called on to operate upon several cases of encysted tumours, and as my experience of these growths, at least as they occur in the orbital region, does not correspond in some respects with Mr. Hamilton's, as published in his memoir in the last number of this journal, I am induced to give a brief account of a few cases, out of many others, which have come under my notice, and to append a few remarks upon encysted tumours generally, as well as upon those which occur in the neighbourhood of the orbit in particular.

Case I.—In the summer of 1853, a farmer, aged 30, consulted me respecting a swelling that occupied the outer part of the left

superciliary arch; it commenced at boyhood and enlarged slowly, was oval in form, about the size of a walnut, and projected downwards so as to occupy the corresponding portion of the eye-lid; the integuments were of a dusky-red colour from a remarkable increase in the number and size of the cutaneous blood vessels; the skin moved freely, but the tumour itself was evidently closely adherent to the subjacent parts; it was also tense, and possessed a certain degree of elasticity as well as fluctuation. A transverse incision through the skin and orbicularis, along the lower edge of the eyebrow, exposed the swelling, which was, in the first instance, detached from its connexions by a process of tearing and cutting—using alternately the handle and blade of the scalpel—at length it was found impossible, from the tumour's tenseness and size, to depress it sufficiently to permit of its separation from the orbital plate, to which it closely adhered; a puncture obviated this difficulty, by emptying the sac, which in a collapsed condition was cautiously dissected from its bony deep-seated attachments, and removed entire; the cyst was thin, but strong, presenting internally a pearly lustre; the contents were semifluid, viscid, and glairy; that portion of the superciliary ridge upon which the tumour rested was rounded off, and presented a blunt depression.

CASE II.—James Dogherty, aged 22, a constabulary recruit. There exists at the outer and upper part of the orbit a smooth globular swelling, about the size of a pigeon's egg; it is situated so as to lie for the most part on the frontal bone, but it entrenches also on the upper lid; the outer extremity of the brow crosses the tumour below its centre; fluctuation is tolerably distinct; the integuments move freely over its surface, but it is evidently fixed to the parts beneath; the lid, where it overlies the tumour, is of a purplish red colour, but towards the temporal region the discolouration is not so manifest. The patient states that the swelling has existed for several years, but that its rate of growth has latterly very much increased. The cyst was brought into view by a transverse incision above the brow, and separated from its cutaneous connexions with tolerable facility, when transfixion with a tenaculum enabled me to free it from the periosteum, and dissect it out entire. The bone presented a well-defined hollow, which interrupted the continuity of the temporal ridge close to the external angular process. The cyst contained a finely granular substance, of the consistence of thick cream, and of a pure white colour.

Case III.—William Wallace, aged 6, was brought to me by his father to have a tumour extirpated, which, springing from the cavity of the right orbit below the eye-brow, formed a prominence in the upper lid about the size and shape of a small marble; the swelling, which existed from birth, was smooth and softish, and the skin over it presented no preternatural vascularity or deviation from its natural condition. The cyst was exposed by a horizontal incision parallel with the folds of the lid; it was very thin, and was accidentally punctured, while separating it from the loose cellular tissue around, so that the contents, which were limpid and clear as water, escaped; however, the collapsed sac was seized with an Asselini forceps and completely removed; it had a slight connexion with the orbital plate of the os frontis.

Case IV.—On the 17th of last September, I removed an encysted tumour from a girl named Mary Macklin, it was placed just above the centre of the left eye-brow; was oval in form; about the size of a kidney-bean; presented an irregular surface; felt rather firm; did not fluctuate; was movable, and the skin covering it presented no discolouration or alteration of structure. The sac was exposed in the ordinary manner, and, after transfixion, completely dissected out; it was not adherent to the bone beneath. The contents were a mixture of steatomatous substance, chalk-like material, and short slender hairs.

No surgical subject possesses greater interest than the pathological history of encysted tumours generally—the large size they are capable of attaining—the deep position they occasionally occupy in the visceral cavities, and their strange and unexpected contents invest these formations with an interest not subordinate to that of any others occurring in the organism. Although the mode of origin of growths such as those produced in the ovaries, amongst the abdominal and pelvic organs, at the bottom of the orbit, &c., cannot be explained upon the principles long ago suggested by Sir A. Cooper, the correctness of the views of this distinguished surgeon, as applied to superficial and subtegumentary wens and cysts, can scarcely be disputed; various circumstances connected with the pathology and symptoms of the tumours last referred to demonstrate their character —they are not new growths, but sebaceous follicles distended into sacs, by reason of imperforate or obstructed excretory orifices, and retained contents. Such swellings are commonly met with in situations where the sebaceous glands are largest and exist in greatest

numbers, *e.g.*, on the head, face, and posterior aspect of the trunk ; when small, they occupy a position immediately under the skin, or are closely connected with it ; on the surface of the tumour, in its early stage, and corresponding with the impervious opening of the duct, a dark point may often be discovered—here a probe can be pushed into the cavity of the follicle, and the contents expressed ; its interior is lined with a stratum of epithelium or thin cuticle, and the contents, however heterogeneous, be they limpid as water, viscid as honey, pap-like or fatty, pultaceous or etheromatous, hairs or horns, whether they present under the microscope the appearance of epithelial scales, perfect or disintegrated, fatty particles, crystallized or amorphous or other elements, they are all the secreted products of the internal surface of the cyst, and correspond in every respect with the substances which a tegumentary glandular follicle is capable of furnishing. Facts like these establish beyond all doubt the opinion of Sir A. Cooper as to the follicular origin of encysted tumours, when subcutaneous or superficial. But the fact of such tumours being occasionally congenital—adherent to bone—occupying a position remote from the skin, and separated from it by a layer of muscle, has opposed itself to the unexceptional adoption of the doctrines enunciated in the *Surgical Essays*, and has led to the opinion that certain swellings of this class, although not far removed from the surface, are nevertheless adventitious growths—new formations—differing essentially from the subcutaneous variety. But it does not appear impossible that a body small at first, and connected with the skin, or even developed in its substance, should as it enlarged in size, come to occupy a deeper position, and be detached, in process of time , altogether from its original connexions. Let us suppose a cyst, for example, to originate in the skin, covering the orbicularis palpebrarum, it enlarges in size and presses backwards, gradually the fibres of the muscle separate, and the tumour passes through them until the greater portion of its bulk lies upon a plane subjacent, but, the tumour being globular, the action of the muscle must now of necessity tend to place it in a still deeper position, and finally, by reapproximation of its fibres, to close over and separate it altogether from the cutaneous texture ; embedded at length in a loose areolar tissue, in close proximity with the periosteum underneath (which is fixed), and pressed upon in front by the muscular structure of the orbicularis (which is movable), it necessarily contracts adhesion to the former. It is no objection to this explanation to say, that encysted tumours are often congenital—the same causes are in

operation during intra-uterine life as exist after birth—the skin is
formed at an early period of fœtal development, and the sebiparous
glandules are in a state of great perfection and activity at birth—
their orifices are probably as liable to become obstructed during
gestation as at any other period of existence, nay more so, from
anatomical imperfection—if the anus may be congenitally imper-
forate why should a follicle not suffer from an analogous abnormity.

In practice, encysted tumours, provided that they have attained
a certain size, and have existed for a moderately long period, will
always be found underlying the subcutaneous muscles, when these
latter present themselves; at least my own experience does not
furnish an example to the contrary; and, when a bone lies near,
they are very prone to contract an adhesion to it, and indent its
surface. No doubt the common wen, when it occupies the higher
regions of the head, seldom attaches itself to the pericranium, a fact
readily explained by the mobility of the scalp in which it is embedded,
and the intervention of the epicranial aponeurosis, the motions of
which it is compelled to follow, but within and about the orbit and
frontal region, where no such structure separates the tumour from
the fibrous covering of the bone, the two will be found more or less
intimately adherent.

Although the majority of encysted tumours of the orbital region
belong to the variety technically called hygroma—thin cysts with
watery contents—it is not to be supposed that this locality is not
obnoxious to other descriptions of these swellings. The second
case detailed in this communication was an example of etheroma,
and the sac possessed by no means an inconsiderable degree of
strength and thickness. In cases Nos. 3 and 4 the integuments
presented quite a natural appearance. In the third case the tumour
was not adherent. In one of the patients, the swelling was more
globular than oval; and in the girl Macklin the cyst had an irregular
outline, and contained, not a fluid, but a suet-like substance,
calcareous matter and hairs. The conclusion, therefore, forced upon
me is, that encysted tumours in the neighbourhood of the orbit do
not possess *peculiarities*, although they frequently differ in many
respects from congenerous swellings of the head and face.

In all operations which interest surfaces so much exposed to view
as the eyelids and parts adjacent, a point of no inconsiderable
importance is the avoidance of unsightly scars and cicatrices, all
incisions here should, if possible, be parallel to the natural folds and
ridges of the skin. I have never found it necessary to deviate from

this principle, nor have I ever met with a case requiring a crucial incision; certainly a vertical division of the lid should not be practised if at all avoidable.

Although in removing the tumour great caution is necessary to avoid an opening, it may be advantageous, on certain occasions, after the cyst has been for the greater part isolated (as when the bone is deeply indented, or the tumour sinks far into the orbital cavity), to permit a portion of the contents to escape through a small puncture, the partial collapse of the sac will diminish its size, and thus permit a more distinct view of its deep-seated attachments. In the first case referred to it would have been perfectly impossible to effect the separation of the tumour from the roof of the orbit, were not this expedient adopted.

After the operation sutures are indispensable; the edges of the wound, from want of due support, have a great tendency to become inverted; a few interrupted stitches made with a slender sewing needle and fine waxed thread, with strips of court plaster at intervals, supported by a well-adjusted compress offer the best means of insuring an accurate union; as for metallic ligatures, I have almost renounced them, and I am not ashamed to confess the heresy.

In cases where the total extirpation of the tumour is impossible, from its deep position or intimate connexion with important organs, a secondary growth is very liable, in process of time, to make its appearance. The tumour is said to " grow again;" but this language is inaccurate: no doubt a swelling does grow, but it is an *adventitious one*, engrafted upon the remnant of the former cyst, which, continuing to perform its function as a secreting surface, furnishes an unorganized product that acts as a foreign body, round which the cellular tissue solidifies into a sac. It is thus relapses occur, and hence the advantage of being able to remove every portion of the tumour. When seated in the orbit, if deeply rooted, a cystic growth is one of very serious import, and may easily be confounded with other causes of Exophthalmos;* nor is laying open the sac, and exciting a suppurative action unattended with danger. We must recollect that the periosteum of the orbit is continuous with the dura mater; and further, that a delicate sheath of the subarachnoid cellular tissue

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* Several years ago a case of exophthalmos was admitted into the City of Dublin Hospital, under the care of Dr. Jacob. The eye-ball was greatly protruded, the cornea dull, and the lids congested and of a purplish colour. It was decided to extirpate the globe, and afterwards to remove the contents of the orbit, if necessary. The first incision at the outer canthus opened a cyst, which immediately emptied itself, and permitted the eye to resume its usual position.

is continued forward around the blood vessels and nerves that enter posteriorly; moreover, that the ophthalmic is in communication with the cerebral veins through the cavernous and other sinuses. Inflammation may readily extend by any of these routes from the orbital cavity to the brain and its membranes; nor is this occurrence by any means rare. Mackenzie, Wardrop, and other ophthalmic surgeons, give cases. When I read of encysted tumours frequently operated upon, both in London and Dublin, before a radical cure could be effected, I may be permitted to congratulate myself at being more fortunate with my cases.

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ART. VIII.—*Some of the Watering Places and other Health-resorts of Switzerland.* By H. R. DE RICCI, M.D.

*(Continued from vol. xxxii., p. 330.)*

I WAS not strictly correct when I asserted just now that the water of Loëche evolves no gaseous products; it does give off about 10 cubic centimetres of nitrogen, and two cubic centimetres of oxygen and carbonic acid gas, in all about 12 cubic centimetres of gases from every 1000 grammes of water, but no sulphuretted hydrogen is evolved until the water has been bathed in, when its presence can unmistakably be detected by the olfactory organs, without the aid of lead test paper; this is supposed to be due to the decomposing action of the sebaceous exudations of the skin on the sulphates contained in the water.

Although Loëche does not offer much in the way of amusements, still its environs are full of beauty and interest. One of the curiosities of the place is the ascent called the ladders, which leads from the valley to the village of Albinen, situated on a high alp on the top of the Wandfluch, on the right of the valley when looking towards the Ghemmi. There is a constant intercourse going on between the inhabitants of Loëche and those of Albinen, but, owing to the precipitous cliffs which hem in the valley on all sides, there is no path by which the natives can communicate except by going a round of nearly six miles, whilst Albinen and the baths are not more than one mile apart; one at the bottom of the valley, the other perched on the top of about 150 feet of perpendicular rock. In order to save themselves this long circuit, the inhabitants have for

centuries been in the habit of scaling this perpendicular buttress by means of ladders placed straight against the cliff, one above the other, fixed to the rock in the most primitive and unsatisfactory manner; the ladders themselves are of the rudest construction, about 12 feet long and three feet wide, the rungs being very far apart, and joggling in their sockets; often rotten—always rickety—they convey to a stranger who attempts to mount them the most unmistakable feeling of insecurity; yet the inhabitants go fearlessly up and down at all times and seasons—day and night—men, women, and children, and accidents rarely happen.   It is surprising to see the heavy loads which these people carry up and down those dizzy ladders, and fearful sometimes to watch two parties meeting, one ascending, the other descending, when, in order to pass each other, the least heavily laden leans out over the precipice from the edge of the ladder to make room for the other to pass.

In this neighbourhood the larch grows wild, it is its native habitat, and some of the noblest specimens of that tree are still to be seen there; I measured one 22 feet in circumference, at about five feet from the ground.   About the middle of the latter half of the last century, the Duke of Athole imported the larch into Scotland, and it was from the neighbourhood of Loëche (I have been told), that he brought the two original trees which have since covered with their progeny half the mountain sides of Scotland. Travelling was a very different matter in those days from what it is in ours, and the Duke, who was travelling on horseback, is said to have carefully packed the two young sapling larches one in each of his *full jack boots*, so to keep them upright and preserve them from injury.   I believe that the original pair of larches which were so brought over from Switzerland, are still to be seen flourishing at Blair Athole.

In what cases, in conclusion, should we recommend the waters of Loëche to our patients?   If we were to give heed to all that local bath doctors tell us of the respective waters of their several springs, there is not an ailment which flesh is heir to, that would not be cured by either drinking, plunging, or soaking in either one or all of them.   I have been at some trouble to make out, by the aid of Dr. Mengis and Dr. Marc d'Espine, President of the Medical Society of Geneva, a list of those diseases in which the waters of Loëche are truly serviceable, and the following appear to be those in which we may expect the most encouraging results:—

First on the list we may place rheumatism, articular and muscular, and we may probably class with it most forms of myalgia and neuralgia. Many forms of skin diseases, especially eczema, herpes, impetigo, and ecthyma, which are invariably cured; unfortunately the same cannot be said in cases of acne, psoriasis, and pytiriasis, although they decidedly improve under the influence of the baths of Loëche.

In amenorrhœa and dysmenorrhœa, these waters may with safety be recommended, as also in cases of vaginal discharges and bearing down, caused by general relaxation of the uterine apparatus and its appendages—we may add goître, but I fear that unless taken at a very early stage, one would not be justified in expecting any great results. The waters of Saxon, would, I think, be much more powerful in dispersing those disfiguring tumours, were it not for the unhealthiness of the locality where they arise, which, combined with the mosquitoes and the suffocating heat, render them totally unavailable, at least to our British population.

Saxon is situated in the valley of the Rhone, on the left of the traveller coming down from Loëche, towards the Lake of Geneva, about half way between Sion and Martigny. The mineral water which supplies the bathing establishment gushes out more like a little torrent than a spring, and it is an unfortunate circumstance that the unhealthiness of the locality will always prevent us from making use of it, for it belongs to that class of iodo-brominated springs which are so powerful in the treatment of those diseases for which they are indicated. I have not been able to obtain an accurate analysis of these waters, but that they contain both iodine and bromine is easily detected, even without an analysis, by the peculiar saffron-like smell which they evolve on being exposed to the air for a short time. Ossian Henry, in a paper laid before the Imperial Academy of Medicine at Paris, states, that 0·110 grammes of iodide of calcium and 0·041 grammes of corresponding bromide are contained in every 1,000 grammes of the water, thus greatly exceeding in strength the somewhat similar waters of Kreuznach, Wildegg, and Heilbrunn. I once met an interesting young patient, a lady from the north of Italy, who was rushing away from the baths of Saxon, unable to support the heat, the stuffiness, and the mosquitoes of the valley of the Rhone. She had been ordered by her medical attendant to those baths, solely from the account he had read of their chemical composition, and probably without the most remote idea of the topography of the place. She was suffering from struma in a very aggravated form, labouring under caries of

the left elbow, and of some of the metatarsal bones of the left foot.
During her short stay at Saxon she had experienced the greatest
improvement from the use of the waters, and felt very disconsolate
at having to give them up. I endeavoured, however, to comfort
her with the assurance that the water she valued so much could be
transported in bottles, and employed in the same way, and for the
same purposes, at a distance from the spring, and in any healthy
locality she might select; for the water of Saxon is *nearly cold*, and
it is notorious that cold mineral waters bear exportation better than
those which rise at a high temperature. This lady, at my sug-
gestion, selected Champery, not far from the baths of Saxon, where
I also was going to spend a short time, for her summer quarters,
and I thus had the opportunity of watching her, and studying the
effect of those waters at a distance from the spring, but with the
adjuvants of bright clear bracing air, and no mosquitoes. This
patient improved wonderfully while under my care at Champery,
and though much of the general improvement was unquestionably
due to the invigorating effects of the pure air of the place, and the
use of a mild chalybeate spring, which rises near the village, and of
which I made her take some every day, yet the amendment of the
ulcers and the contraction and improved look of the several sup-
purating surfaces was undoubtedly due to the waters of Saxon, with
which I kept them constantly wet by means of linen compresses.
I think I can safely assert this, for whenever the Saxon water
happened to be run out, and that I dressed with plain spring water,
the granulation became flabby, the discharge unhealthy, and the
smell intolerable.

Between Saxon and Villeneuve, and precisely at the point where
the Rhone has to force a narrow passage for itself between the
mountains of the Dent du Midi and the Dent de Morcles, lie the
baths of Lavey; they are much frequented by the Swiss themselves,
and by French and Germans, but I do not think that they will
ever attract many from these countries, as they labour under the
same disadvantages as the baths of Saxon, though in a minor degree.
The water of Lavey is sulphurous, but not to a very high degree;
it contains lime, potassa, soda, and strontian, and 100 cubic centi-
metres give of

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|---|---|
| Nitrogen, | 27·80 |
| Carbonic acid, | 4·34 |
| Sulph. hydrogen, | 3·51 |

It does not spring forth, but has to be pumped up from under the

bed of the Rhone, and thence conveyed in pipes to the baths, losing in its course a considerable portion of its gaseous components and much of its heat, so that while at the source itself it is pumped up at a temperature of 43° centigrade, it has to be warmed over again at the establishment, and by that means loses still more of its constituent gases.

In the vicinity of Lavey are the salt mines of Bex, which are well worth a visit. The principal gallery runs straight into the mountain for about 1¼ mile, with an average height of eight feet and five feet in width. At 400 feet from the entrance is a round chamber, excavated in the solid rock, and used as a tank for dissolving the rock salt. It is eighty feet in diameter and ten feet in height, the immense vault of rock being totally unsupported in its entire extent. The extraction of the pure table salt from the solutions of rock salt is carried on exactly in the same way as at Kreuznach, in Germany, and the mother-water, *mutter-laüge*, which remains after the salt is crystallized, is employed at the baths of Lavey to strengthen the mineral water, the same as at Kreuznach, by a certain quantity of it being added to each bath, according to the requirements of the case, and the directions of the resident physician. The most important ingredients of the mother-water from the salt factories of Bex are, bromide of sodium and bromide of magnesium, about 8 grammes of the former and 2½ of the latter to each kilogramme of *mother-water*. The quantity of this *mother-water* added to each bath of Lavey mineral water is about 2 litres at the commencement, and gradually increases to 30 and 35 litres for each bath. This quantity is seldom exceeded, nor long continued, and is gradually diminished until reduced to the original 2 litres with which the patient had commenced.

The waters of Lavey enjoy a great reputation in Switzerland for their efficacy in the treatment of scrofulous and rachitic diseases; they are also said to cure goître and some cutaneous affections. I have little doubt that they principally derive their curative powers from the bromides of the mother-water, which is added to them, though no doubt the combination of them with the sulphuretted water will render it more efficacious in the treatment of those skin diseases which it is said to cure.[a]

[a] It appears to me that we might take a practical hint, from the *plan* followed in other places, of strengthening feeble mineral waters by the addition of the residual waters of salt refiners, and employ some of the *mutter-laüge* of our own salt factories, either diluted with plain water, or with water containing, like that of Lavey, a small proportion of sulphurates, and apply it in the form of baths in the treatment of cutaneous disorders and rheumatic affections.

I mentioned above, that a young lady, suffering much from scrofula in an aggravated form, had derived much benefit from her sojourn at Champery. I think this place deserves more notice than has hitherto been bestowed on it, not as a bathing place, but as a *health-resort* for the summer months. I do not recommend it to those who seek for *pleasure* in the excitement of the gaming table, for, alas, there is no Casino, no Kur-saal, at Champery! But for those who can see beauty in the ever-varied works of the Great Architect—the pine-clad slopes, the towering rugged rocks, the foaming torrent, or the still solemn wilderness of the glacier— Champery will offer much enjoyment. It is situated nearly at the top of the Val d'Iliers, a valley stretching up towards the mountains of Savoy, from the left bank of the Rhone, about midway between the baths of Lavey and Villeneuve. Champery is about 4,500 feet above the level of the sea, and beyond the region of *mosquitoes;*— this invaluable quality can only be fully appreciated by those who have felt what *insects are;*—to those who do not know them, I recommend one night at Martigny in the month of July or August. Champery is situated on the western slope of the valley facing the fantastic profile of the Dent du Midi. It has good accommodation at a reasonable cost. It is admirably situated for mountain excursions, from the easy ride to the Croix de Cullet to the more arduous ascent of the Dent itself, whose principal peak rises to about 11,000 feet. Another great advantage it possesses, is in not being yet hackneyed; the people about the place are unsophisticated; and it is refreshing to find oneself in Switzerland, at last out of the universally beaten track, and for a time relieved from that human flood which, by degrees, is converting that glorious country into an overwhelming Cockney watering-place.

Not far from Champery, in the midst of a wilderness of pine trees, is Morgins; it is reached by a track—I can scarcely call it a path—which leaves the road from Monthey to Champery, on the right of the traveller going up the valley. It possesses an hotel of the most primitive kind; but many Swiss resort to it yearly for the purpose of inhaling the forest air, which, passing over the stems of the fir trees, all encrusted and dripping with resinous exudations, becomes charged with their odours and exhalations, and in the curative powers of which, especially for bronchitic affections, the Swiss place great reliance. I met there a most intelligent lady, who during many years had suffered from a chronic form of bronchitis, with excessive secretion; she passed her winters at Montreux,

on the Lake of Geneva, and the summer in the mountains, now in one place and now in another; but for the last three summers she had come to Morgins, in consequence of the great benefit she had derived, as she expressed herself, from breathing the air charged with turpentine. At the time, this account did not make much impression on me; but having read, since my return, that interesting and excellent monograph of Dr. Corrigan's on Arcachon and its pine forests, I was forcibly struck with the similarity, and I now place faith in the accounts which I received of the curative effects of the air of Morgins. But not only those who suffer from bronchitis and other pulmonary affections, are said to derive benefit from a summer residence among those pine forests; chronic ophthalmia is often cured, and always relieved; and also many other forms of disease resulting from abnormal conditions of the mucous membrane.

The Swiss, not satisfied with inhaling the balsamic air of these forests, and leading at the same time the most regular and healthful life, endeavour to add still further to their manifold advantages by taking what they call the whey cure; this consists in deluging their insides with enormous quantities of the whey which remains after the manufacture of goat cheese. This whey, of which they take from 6 to 12 tumblers with the greatest gusto before breakfast, was to me the most nauseous dose I ever encountered; they drink it tepid, allowing a quarter of an hour between each dose! but one taste was sufficient for me. As for any advantages to be derived from it, excepting in so far as it acts daily as a purgative, I can see none, and as whey is nothing more than milk minus its nutrient properties, I am inclined to think that a bowl of the pure milk, warm from the goat, with perhaps the addition of a lump of sugar, and a table spoonful of rum or kirchwasser would, in all probability, have been of far greater service to invalids. The great place for the whey cure is Gais, in the Canton of Appenzell; but wherever the Swiss, French, or Germans resort for the summer, if there is a goat to be had at all, its lucky possessor is sure to convert its milk into whey.

Another favourite cure in Switzerland is the grape cure; and of this I beg to speak with far more respect. In the first place it is, unlike the last-mentioned remedy, very pleasant to take, and in the second instance it is of real service. Grapes will not cure consumption as some have asserted; but I have seen it do a wonderful deal of good in cases of marasmus, brought on by habitual intemperance and indulgence in all sorts of excesses. I have seen persons

who *looked as if consumptive,* gain flesh and strength under the use of large quantities of grapes, and a friend of mine—a highly intelligent individual, who on several occasions had to take cod liver oil in this country, not for any pulmonary complaint, but for general debility and wasting away—assured me that after eating for several days from two to three pounds daily of grapes she felt invigorated exactly in the same way as if she had taken cod liver oil for the same lapse of time.   I would always recommend any patient that I would send to Loëche, to adjourn to Vevey in the commencement of September, after having undergone the ordeal of those baths; and at Vevey to finish the treatment by going through the process of the grape cure, than which no cure can be more simple.   The grapes are delicious, especially if you take care to purchase only such as come from Aigle, and the cure consists in eating as many of them as you can manage! the first thing in the morning—the last thing at night—at breakfast, luncheon, and dinner; and I never knew a patient to tire of them, nor resist their fattening properties.

# PART II.

## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

*Observations in Clinical Surgery.* By JAMES SYME, Professor of Clinical Surgery in the University of Edinburgh. 8vo, pp. 217. Edinburgh: Edmonston and Douglas. 1861.

" IT is my intention," says Professor Syme, in his preface, " at no distant date to publish some further illustrations of the principles I am accustomed to teach." We earnestly hope to see this intention carried out, as, in so doing, the distinguished Edinburgh Professor will unquestionably give to the world, in the results of his experience, a work not inferior to anything that he has already done. Surgical cases, truthfully detailed, will never lose their interest in the eyes of practical men; and although the observations of Mr. Syme, and the doctrines which he lays down with so much authority, will not, nor ought not, to pass unquestioned; yet, we doubt not, that they will be considered with all the respect due to an individual who has devoted his life, with so much earnestness and success, to the cultivation and advancement of the science and art of surgery.

The present volume of observations in clinical surgery consists of thirty-five short essays on surgical topics, with illustrative cases. It is obvious, therefore, from the very nature of the work, that it would be impossible for us to give anything like a critical analysis of it, and that the reader must, in the pages of the work itself, seek out the views of the author on many of the subjects, from among which we can but select a few.

*Fracture of the Thigh Bone.*—Mr. Syme starts by boldly announcing that there are few principles more entirely erroneous than that extension is essential for the successful treatment of a fractured thigh bone. This, indeed, he long believed, but is now convinced that it is equally unsound in theory, and opposed to good practice.

" When it is recollected," he says, " that tension is the proper stimulus to muscular contraction, the evils resulting from it will not appear so surprising as that any one should so far forget his physiological principles as to engage in it. Instead of exciting the muscles to contract, by subjecting them to extension, the great objects in treating a fracture should be to place them at rest, and, by protecting them from all sources of irritation, to oppose their contractile action. To accomplish this, the prevention of motion is of most consequence, and hence arises the great value of Mr. Potts' improvement in the construction of splints, (and, better still, Desault's splint acts on the same principle,) by preventing any of the articulations from moving, and keeping the whole limb in a state of perfect quiet."

" In treating a fracture of the thigh bone, the first step should be to draw out the limb to its proper length, direction, and shape; and, if this cannot be done readily, on account of the patient's involuntary resistance, it may be accomplished through the aid of chloroform. Two splints of wood, leather, or pasteboard, the full length of the thigh, from the trochanter major on one side, and the perineum on the other, to below the knee on both sides, are then to be applied, and secured by four or five looped bandages, and, lastly, the long splint, wrapped in a sheet or table-cloth, of which enough is left free for covering the limb, being placed by the patient's side; the loose portion is brought over, and fastened to the board, after which, by means of the perineal and ankle bands, together with one round the body, the whole apparatus is rendered secure."

Mr. Syme then gives the general result of this mode of treatment, as seen upon sixteen cases of fractured thigh occurring in his wards, from September, 1859, to March, 1861. The entire sixteen were treated without extension. In one of them there was shortening to the extent of one inch, owing to the complication of an oblique fracture of the leg; in another, the limbs were found to be of precisely the same length; while, in the remainder, the shortening varied from a half to three quarters of an inch.

*Ununited Fractures.*—With reference to the treatment of ununited fractures, Mr. Syme lays great stress on preventing, as completely as possible, all motion of the part affected. He has been long satisfied that the expedients in ordinary use, or, at least, usually recommended, such as rubbing the broken ends together, stirring up their connecting medium by the introduction of needles,

or passing setons through it; if they were ever found to prove successful at all, did so, not from their own direct agency, but from the enforcement of rest conjoined with their employment, which would have been equally efficient, although not associated with other remedial means. He contends that, under ordinary circumstances, the accomplishment of osseous union will take place, if the parts are kept perfectly free from motion by the proper application of splints. To effect this, is, however, often by no means an easy matter; it will be necessary to envelop the entire limb in a firm case of starched pasteboard so as to lock in immobility all its articulations. If, however, the morbid condition is too firmly established to admit of being remedied by this treatment, Mr. Syme does not hesitate to resort to what he pronounces emphatically to be the only other means really capable of overcoming the difficulty : this is cutting off the ends of the broken bones together with the ligamentous substance connected with them, so as to obtain two osseous surfaces, which may be placed in the proper relation to each other, and steadily maintained in it by the rigid pasteboard case.

"CASE.—J. H., aged 34, a private of the — foot, while discharging some duty in the Redan on the 8th of September, 1855, after the occupation of Sebastopol, was blown up by a Russian mine which had escaped detection, and, in addition to some slighter injuries, sustained a fracture of the left arm, between two and three inches above the elbow. He walked up to his regimental hospital, where splints were applied and retained for a month, when, there being no signs of union, the ends of the bone were rubbed together and supported by a starched bandage. He left the Crimea on the 3rd of February, and was sent to the hospital at Renkeioi, where a seton was passed through the seat of fracture, and retained for five weeks without any benefit. On the 20th of May he proceeded homewards, and after a long voyage of nearly two months arrived at Portsmouth, whence he was transferred to Chatham on the 17th of July. No attempt to restore rigidity was made there, and at the end of two months he was dismissed the service with a pension of one shilling per day in consideration of his disability, which was regarded as equal to the loss of a limb.

"In the hope that relief might still be afforded, he applied to me on the 22nd of January, 1857, nearly 14 months from the date of the injury, and finding that the arm was entirely useless, through the extreme mobility of the ends of the bone, which overlapped each other to the extent of more than an inch, I resolved to adopt the only procedure that,

in my opinion, afforded any reasonable prospect of remedy under such circumstances, which was, to remove the ends of the bone, and afterwards maintain the most perfect rest, by placing the whole limb under restraint. Proceeding with this view, my first step was to have the arm put in an easy position, with the elbow bent at a right angle, and then covered from beyond the shoulder to the tip of the fingers with pasteboard and starched bandages, so as to form a case, which, when it became dry, effectually prevented the slightest movement in any of the joints. This case was next cut up on one side from end to end, so as to allow the arm to be taken out of it and undergo the requisite operation, which was performed under chloroform. An incision having been made along the outer edge of the triceps, I exposed the upper end of the bone, and sawed off a portion of it sufficient for obtaining a complete osseous surface. The lower end, lying anterior to the shaft, could not be subjected to the saw, but was removed to the extent of more than an inch by cutting pliers. The arm was then supported by a couple of splints, and the patient lay quietly in bed for a fortnight, when the limb was placed in its pasteboard case, in which an aperture had been made over the wound, then nearly healed, and discharging a very little matter, that soon ceased entirely. The patient feeling that the slightest motion was impossible, even if he had wished it, was relieved from any further restraint, and no longer remained in bed. At the end of a month, or, altogether six weeks, from the date of the operation, which was performed on the 30th of January, the limb was examined and found to be quite straight, with a firm osseous union, so that the patient was able to leave the hospital, not only with his comfortable pension, but also with a perfectly useful arm."

*Formation of new Bone.*—When speaking of this, we are glad to find Mr. Syme admitting the important practical fact which pathology and physiology have long since taught, although practitioners have been slow to recognise and admit it, that the periosteum is the principal nidus for the formation of new bone. " New bone," he says, " may be formed to a certain extent by growing out from the surface of the old one, so as to lessen the size of an aperture, such as that made by triphining the skull, or diminish the distance between the extremities where there has been loss of substance in one of the long bones; but when produced copiously, as in a case of necrosis, where there is complete restoration, its formation certainly takes place in the periosteum, any deficiency in which curtails its production to a corresponding amount, and hence the irregular apertures observed in a new osseous shell during the period of its formation, which, in the language of

necrosis, are called *cloacæ*, and were formerly attributed erroneously to the effect of absorption induced by the presence of confined matter."

*Amputation of the Ankle Joint.*—Mr. Syme objects very strongly to the so-called "improvements" made upon his operation at the ankle, and he urges upon those who would desire to perform this amputation with success, the necessity of not taking directions as to the true method of performing it at second hand.

"The surgeon of a large hospital told me that, having heard of amputation at the ankle, he had performed the operation repeatedly, according to the direction of a London surgical manual, with the invariable result of sloughing, but that then, being advised by a friend to look into my own book, he had altered the procedure with constant success. . . . . In performing the operation, the foot being held at a right angle to the leg, the point of a common straight bistoury should be introduced immediately below the fibula, at the centre of its malleolar projection, and then carried across the integuments of the sole in a straight line to the same level on the opposite side. The operator having next placed the fingers of his left hand upon the heel and inserted the point of his thumb into the incision, pushes in the knife with its blade parallel to the bone, and cuts close to the osseous surface, at the same time pressing the flap backwards until the tuberosity is fairly turned, when, joining the two extremities of the first incision by a transverse one across the instep, he opens the joint, and, carrying his knife downwards, on each side of the astragalus, divides the lateral ligaments so as to complete the disarticulation. Lastly, the knife is drawn round the extremities of the tibia and fibula, so as to expose them sufficiently for being grasped in the hand and removed by the saw. After the vessels have been tied, and before the edges of the wound are stitched together, an opening should be made through the posterior part of the flap, where it is thinnest, to afford a dependent drain for the matter, as there must always be too much blood retained in the cavity to permit of union by the first intention."

Mr. Syme, eulogises his operation very highly on account " of its facility and simplicity;" we must confess, that we do not, by any means, consider, that its chief merit lies in its facility of performance; even upon the dead subject, and done in strict accordance with Mr. Syme's directions, very frequent repetitions of it do not justify us in regarding it as other than a tedious operation. It has, however, other great and incontestible merits which, in our judgment, render it more advantageous, in the majority of cases, than any of the "improvements" upon it suggested by others. That,

however, there are cases for which, the modification of Professor Pirogoff, of St. Petersburgh, is well suited, we cannot doubt. In certain injuries of the foot, in attempting to retain part of the os calcis, one is not running risk, as in cases of disease of the bones, of retaining a portion of the osseous tissue, justly liable to the suspicion of relapse. We are not, in fact, by the arguments of Mr. Syme (vigorously put, no doubt), at all convinced, that the adoption of this modification is to be regarded as a certain sign of lax surgical principle.

*Diseases of the Rectum and Anus.*—It is indeed, very true, that a surgical case is read with interest by practitioners, not merely on account of its individual features, but, because it illustrates the effect of treatment, and enables them to determine the value of practical principles for their own guidance. In no part of Mr. Syme's book, is one more struck by the force of this, than in perusing his cases of diseases affecting the rectum and anus:—Spasmodic stricture, and fissure of the anus, fistula in ano, internal hemorrhoids, and pro-lapsus ani, hemorrhage from the rectum, being each illustrated by cases which are made the subject of sound practical comment. Most writers have hardly noticed any other cause of hemorrhage from the rectum, save that arising from the occurrence of internal piles; Mr. Syme, however, has met with, and details, some cases of profuse and obstinate bleeding, where there was not the slightest trace of internal hemorrhoids. That pendulous flaps of skin, says Mr. Syme, hanging round the anus, should give rise to a serious flow of blood, seems, in the highest degree, improbable, and might, indeed, be deemed altogether incredible, were it not proved beyond the possibility of question, by well ascertained facts. As to how the presence of external hemorrhoids causes bleeding from the bowel, no attempt at explanation is offered; the facts, however, because we do not see how to explain them, are not the less impor-tant in practice, more especially, as Mr. Syme tells us, that he does not regard such cases as being of, by any means, infrequent occur-rence. Another source of hemorrhage from the rectum which he speaks of, and which could not have been readily suspected or antici-pated, is spasmodic stricture. The fissures and ulcers which are so frequently connected with this condition, usually discharge a little blood, although hardly in such a quantity as to constitute a promi-nent feature of the case; but, independently of any such complica-tion, a mere contracted state of the sphincter may occasion the most profuse and serious bleeding; as an instance of this, Mr. Syme

mentions the case of a gentleman, a student of medicine, who complained of bleeding at stool, but who, on examination, was found so perfectly free from hemorrhoidal disease, that he was supposed to be labouring under a delusion. Some time afterwards he became extremely pale and emaciated, and Mr. Syme learned from a companion, who resided in the same house with him, that there was really a copious discharge of blood, which issued in a fluid state and then coagulated. On making another examination, it was found, that the external part of the sphincter was tightly contracted; this being judged to be the cause of the bleeding, a division was made of the tight muscular fibres. This had the desired effect, no blood was afterwards discharged.

"There is still another source of hemorrhage from the rectum, of which, I have met with only one example. The patient was a young lady, whom I saw along with the late Dr. Graham, the Professor of Botany. She had lost so much blood as to excite attention, by her altered appearance, and was brought from the country in quest of relief. I could not detect any hemorrhoidal disease, or any other recognised derangement, but observed, that when expulsive efforts were made, the blood issued from a small round orifice, apparently seated in a varicose vein. To this point I applied a ligature, with the effect of affording complete relief."

We have now given enough of extracts from Mr. Syme's work, to place before our readers the form and general plan followed by the author. As to its peculiar merits, and what appear to us, its faults, we feel it would be presumptuous to speak in the language of ordinary criticism. The long-acknowledged and justly great reputation of the author, places him beyond the reach of this. That a person in the position, and who has attained the eminence of the Professor of Surgery, in the University of Edinburgh, should, as he has done, and promises to do, set forth his views, and give to his juniors the benefit of his vast experience, is, in itself, a proof not only of his love of his profession, but of his earnest desire to establish what he believes to be true, and to spread the knowledge of those principles which have made him a singularly useful and successful practitioner. It yields unequivocal evidence of sincerity of purpose and of a nature elevated above all sordid professional ends. Holding this opinion of Mr. Syme, believing that, when he writes (as he has not unfrequently done), with great acrimony, he does so with the intention of attacking vigorously, what appears to him

to be false, we regret that he does not show more readiness to acknowledge in others the same truth-seeking earnestness which we recognise in him; without, at the same time, by any means, agreeing in many of his dogmas. Enthusiasm and toleration rarely go hand in hand, least of all, perhaps, in Scotland; hence, we must excuse the cuts occasionally made at his neighbours " on the southern side of the Tweed;" his exposition of blunders or malpraxis, witnessed in the " metropolitan hospitals of a neighbouring country;" while we do not think that there is anything more than a little natural self-glorification in the publication of Mr. Bransby Cooper's letter, giving Sir B. Brodie's, Mr. Travers', and Mr. Caesar Hawkins' opinion of Lord ———'s case, in which Mr. Syme subsequently obtained so distinguished a triumph.

These characteristics, however, detract little from the real merit of the book, for which the thanks of the profession are, indeed, due to the distinguished author.

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*Des Hallucinations, ou Histoire Raisonnée des Apparitions, des Visions, des Songes, de l'Extase, des Rêves de Magnétisme et de Somnambulisme.* Par A. BRIERRE DE BOISMONT, M.D. Troisième édition. Paris: Baillière. 1862. 8vo, pp. 718.

*On Hallucinations, or A Rational History of Apparitions, Visions, Dreams, Extasy, the Dreams of Magnetism and of Somnambulism.* By A. BRIERRE DE BOISMONT, M.D.

THE work of M. Brierre de Boismont, a third edition of which lies before us, has long enjoyed a high reputation, partly due to the exceeding great interest naturally belonging to the subject, and perhaps as much to the admirable manner in which the distinguished author has achieved the task, for which his learning and industry so well qualified him. The former editions were not noticed in our pages; and we therefore regret that space will not admit of our going as much into detail as would be desirable, to give our readers an adequate idea of the excellence of this important contribution to psychological medicine. Our efforts shall be directed more to cull from its pages, than to enter upon the task of elaborate criticism, and to thus excite curiosity and induce a desire to peruse the whole. Before commencing the history of

hallucinations, our author observes that false perceptions were noticed by the ancients, and that they even distinguished hallucinations of sight, of hearing, and of odour. The definition of hallucinations is referable to remote antiquity, but to Arnold may be attributed the credit of having proposed one which is almost complete. After quoting the definitions of Arnold, Crichton, Esquirol, Calmeil, and others, he gives his own, which we may best transcribe in the original words, " *l'hallucination,* la perception des signes sensibles de l'idee; et *l'illusion,* l'appreciation fausse des sensations réelles."

The word hallucination, in scientific language, is applied, in general, to that mental condition in which the individual (to use the words of Arnold), imagines he sees, hears, or otherwise perceives, or converses with persons or things, which have no external existence to his senses at that time. The second chapter is devoted to the consideration of hallucinations compatible with the possession of reason; and, it abounds with the most remarkable instances on record, derived from various sources. We may extract a few of the most interesting. Some of these hallucinations are of the most pleasurable character:—Take, for example, the case of a " Savant," who had lost, soon after marriage, a wife, ardently beloved, but who, many years after the tomb had closed upon her, was present to his sight in all the majesty of her beauty, when, on returning to his country house, he placed himself in the vicinity of a spot she was in the habit of frequenting. How different would have been the sad reality, when age had bereft the once fair form of every charm which, in by-gone days, had so captivated him—

> " And the loved forms, he never more must meet,
>     Are with him in the vision, fair as when,
>         Long years ago, they clasped his hands at parting."

The letters on Natural Magic, by Sir David Brewster, and the History of Demonology and Witchcraft, by Sir Walter Scott, afford examples of the most wonderful hallucinations. In the case of Nicolay, communicated to the Royal Society of Berlin, we have the subject of the hallucinations himself, studying and analysing his sensations, and assigning the appearances of the spectres to a lesion of the cerebral circulation.

The effect produced by apparitions, varies in different cases. Nicolay became familiar, as it were, with them, and they caused him little disquietude; whereas the distinguished person, whose

history was communicated to Sir Walter Scott by an eminent physician, died a prey to the agony which harassed the last years of his life.

A state of weakness, convalescence, and the prodromal symptoms of asphyxia, are occasionally productive of hallucinations. Leuret, himself a physician, relates a strange hallucination in his own person:—He was attacked by influenza, and he was bled; after which he became weak, but without losing consciousness, and he remained so for eight hours. He distinctly heard a flask placed on the table beside him, and, immediately after, a crepitation as if an acid was poured on a carbonate; he supposed, at first, that an acid had been spilled on the marble table. Having satisfied himself that he neither dreamed nor was delirious, he came to the conclusion that he had been deceived by an hallucination.

Andral was the sport of a strange illusion, when, labouring under indisposition, he perceived a dead body for some moments in his chamber.

Our lamented friend, Sir Henry Marsh, related to us, many years since, an interesting example of an illusion of which he was himself the subject. Early in his professional life, he devoted himself with much zeal to the investigation of the phenomena of fever, the results of which he published in the 4th vol. of the *Dublin Hospital Reports*, under the title of " Observations on the Origin and Latent Period of Fever," a memoir which proved that he possessed in a high degree those qualifications which enabled him to attain the foremost rank in the profession of medicine. While engaged in close attendance on the sick, Sir Henry Marsh contracted the fever which then prevailed as an epidemic. He was attended by Dr. Cheyne, and, for a considerable period, while labouring under the disease, whenever Dr. Cheyne entered the room, he saw a second figure, resembling in the most minute particular his friend, Dr. Cheyne. The two figures—one, the real man; the other, as it were, an impersonation of him—were before him. He was all the time perfectly aware that the second figure was a phantom of his brain, which had no existence but in his disordered imagination.

In Abercrombie's *Inquiries Concerning the Intellectual Powers*, there is mention made of a man who had been all his life a prey to hallucinations. When he met a friend in the street, he did not know, at first, whether it was the veritable person, or a phantom; but he was soon able to distinguish, by the sense of touch, or by listening for the noise of the footsteps. This person had, moreover,

the power of recalling the creations of his imagination by an effort of will.

M. Brierre de Boismont, under the head of hallucinations compatible with the possession of reason, refers to many tales, which, we fear, are either altogether apocryphal, or belong to the category of hallucinations of the insane. The visions of Constantine, of St. Genevieve, and of another maiden, who, coming ten centuries later, was a second saviour of France, are alluded to.

Passing from ancient to comparatively modern times, we have the hallucinations of Oliver Cromwell, of Descartes, Malbranche, Pope, Byron, Göethe, Bernadotte King of Sweden, &c., &c.

M. Brierre de Boismont next proceeds to consider hallucinations in connexion with illusions, and rightly observes, that the study of the former should not be separated from the latter. He then gives the differential character first established by Esquirol: in the case of hallucination, the absence of any external form; while, for the basis of illusion, there must be some sensible object. A man affirms that your figure is that of a cat, or of Napoleon; he is the subject of illusion Another, who, in the night time, hears voices which speak to him, and perceives personages which no one else can discover, is under the influence of hallucination. The privation of sight and of hearing is no preventative to hallucinations, whereas it is an obstacle to illusions.

M. Dechambre, however, thinks Esquirol is not justified in making the distinction. The person who, under the dominion of an hallucination, believes that he hears voices, which speak, and the person who, under the influence of illusion, having a friend before his eyes, believes that he sees an ox or a devil with horns, present no fundamental difference; for in one, as in the other, it is the brain which is diseased, and not the organs of sight or of hearing. That illusions frequently exist with hallucinations, and that they mutually pass one into the other is matter of every-day experience.

M. Brierre de Boismont persists, notwithstanding the opinion of Calmeil, Aubanel, and others, in considering the two orders of phenomena as distinct, chiefly from the fact before referred to, viz., the necessity for the presence of an object in illusions, and its absence in hallucinations.

It is familiar to most people that illusions are compatible with perfect sanity, but that such are easily corrected by the power of reasoning. Should such false impressions be called illusions?

Dr. Forbes Winslow observes: " As long as the judgment

retains the power of correcting the false impressions made through the sensuous organs upon the brain, the notices thus conveyed to the mind cannot, in scientific phraseology, be called either illusions, delusions, or hallucinations; but they become so when they are extravagant and unreasonable in their character, and the judgment ceases to operate in rectifying the false ideas, and the conduct of the individual is evidently influenced by them."

Some false impressions are easily corrected, and are well known to all: such as, for example, a square tower appearing to be round, when viewed at a distance, &c., &c.

There are others, however, the veritable cause of which has only been appreciated in later times, owing to the progress of science: such as the optical phenomenon of the Hartz Mountains; the Giant of Brocken; and the phenomena of like character observed in Westmoreland and other mountainous countries.

Many circumstances give rise to illusions, of which ignorance is, doubtless, the chief. The traditions met with in different countries are, in a great measure, due to illusions of sight.

The following anecdote, told by Dendy, proves that an event which has made a powerful impression, aided by an association of ideas, may produce an illusion:—" Some days after the execution of the Prince of Moscowa, an evening party was assembled at a house in Paris. The servant, whose duty it was to name the guests as they arrived, hearing the name of the M. Maréchal aîné, announced M. le Maréchal Ney. An electric shock pervaded the whole company; and the narrator declares, that the resemblance to the Prince was, in his eye, for a second, as perfect as if it were reality."

Many of the tales recounted in ancient times may be explained on the supposition that illusion of sight or hearing was the proximate cause. Our author refers to the story of Ajax attacking the swine, of king Theoderic, of Bessus, &c., &c. Illusions of sight and hearing have sometimes assumed an epidemic form. The fate of battles have been decided by illusions according to ancient history. During the battle of Platea the air resounded with terrible cries, which the Athenians attributed to the god Pan, and thence, according to some, the word panic.

Touching the frequency of hallucinations among the insane, according to Esquirol 80 per cent. are subject to hallucinations: this our author looks upon, with reason, as too high a calculation. It is among monomaniacs that they are most frequent. Marc observed a man who, from reverse of fortune, had become melan-

cholic; for many years he had not spoken a word, his sole occupation consisted in smelling and licking the walls. On one occasion the superintendent, without appearing to remark him, asked what had caused the dirty marks and depressions on the wall. The silence which had existed for years was broken, and he exclaimed "Do you call those dirty marks—do you not see they are oranges of Japan?" What delicious fruits, what colour, what odour, what an admirable taste! and with redoubled ardour he applied himself to his task; henceforth, instead of looking upon him as one of the most unhappy inmates of the asylum, it was evident that his delightful hallucinations of sight, of hearing, and of smell, were the means of procuring for him endless enjoyment.

Hallucinations of hearing are the most frequent by many degrees, and the privation of the sense is no obstacle, as persons who were deaf have held long dialogues with imaginary beings. The invisible speakers may be internal or external. The voices may come from the heavens, from a neighbouring house, from the corners of the room, &c., &c.; they may emanate from the head, from the belly, or some other part. Hallucinations of hearing may be simple, or combined with those of sight and the other senses. In all times, and among all people, hallucinations of sight have played an important role; to them are particularly attached the name of "Vision," and to the affected, "Visionaries." In ancient times, and in the middle ages, the belief in visions was general. Hallucinations of hearing, and of sight, are often united; as in a remarkable case of a man who held frequent communications with denizens of the other world, conversing with Moses, dining with Semiramis and being on intimate terms with Richard the Third. On being asked if he had questioned Richard on the subject of the murders he had committed, and what answers he had given, he said—"What you call murder or carnage is, in reality, nothing. Cutting the throats of some 15 or 20,000 men does no harm, they pass to a better world and a more perfect state of existence. The man who reproaches the assassin is guilty of ingratitude."

*Hallucinations* of *touch* are surrounded with difficulties as regards their study; they are confounded with neuralgias and visceral illusions.

We remember seeing a gentleman some time since who supposed that he was the victim of persons who were perpetually sending electric currents through different parts of his body. He passed

whole days in a boat, as he assured us from the experience of the fact, that while on the sea his enemies had no power over him. Calmei reports the case of a veteran who believed that each night he was nailed in a coffin and transported from Charenton to Vincennes, where a mass for the dead was chaunted in the chapel of the palace ; by the same invisible personages he was brought back and placed in his bed. The sensation of flying is very commonly experienced. M. Brierre de Boismont frequently found a literary friend of his with eyes fixed, who exclaimed—"*Je vole, ne m'arrêtez pas.*" When he was restored to himself, he recounted his sensations. This has been reported in ancient times.

St. Jerome says, that he experienced in dreams the sensation of flying above the earth, over mountains and seas. Madame d'Arnim, the friend of Göethe, believed that she flew and hovered in the air. The sensation of hovering was to her a delicious feeling.

*Hallucinations* of *smell*, like those of taste, are rarely isolated ; they are generally associated with those of hearing, of sight, and of touch. Some of the insane experience the most pleasurable sensations, and again there are others who suffer pain from the presence of these hallucinations.

The saints frequently get the credit of diffusing odours with which the perfumes of Araby can scarcely be compared, and devils are believed to spread around the most abominable and disgusting stinks.

*Hallucinations* of *taste*, are of the most pleasurable or distressing character. Some are engaged in smelling imaginary viands and liquors, in swallowing ambrosia and nectar; others in eating raw flesh, arsenic, &c., &c. We remember a patient who, after eating a good dinner, became suddenly sick, exclaiming that he had been eating human flesh. With reference to the existence of hallucinations and illusions in mania, our author has collected 229 observations. Of this number 178 exhibited these phenomena, and 54 manifested no false perception. There are numerous instances of mania suddenly arising under the influence of an hallucination. A woman saw a friend in a dream, who, at the time, was in Africa; he told her he had perished in combat, and he presented his hand to her, she touched it and found it cold; she awoke with a bound, and she was found to be in a state of mania. Under the domination of an illusion suddenly taking possession of a person, crimes have been committed, and to the psychologist the proof is conclusive, that the individual has lost the power of will, and that, therefore, he is

not accountable, but unfortunately the law does not recognize impulsive insanity. Some maniacs slay, because they think the devil is before them; others, because they obey some command-ment. His satanic majesty plays an important part in many cases. A woman once informed her husband that Satan lay with her every night. Of 303 patients labouring under melancholia (mono-manie triste of our author), 248 were the prey of hallucinations and illusions, and of these 212 presented all the characters of pain. In general, the apparitions have a hideous and frightful form; sorcerers and devils coming out of hell are frequent, particularly with females.

In some examples of this form of mental aberration, the halluci-nations and illusions owe their origin to a real event. The night before a judge was obliged to pronounce judgment in a case, in which one of his friends was the accused; the culprit's wife pre-sented herself to him, and urged upon him every appeal which could move the heart. On finding him inexorable, she fainted, and was carried away dying. The judge did not fail in the performance of his duty; but, the event made such an impression on him, after a little time, as to occupy his thoughts altogether; he believed that he had exceeded his duty, that every one addressed reproaches to him; his life became insupportable, and after an attempt at suicide, he was brought to an asylum.

Although, in general, the hallucinations and illusions in melan-cholia, are remarkable for fixity and durability, they, nevertheless, in some instances, suddenly, and when least expected, disappear. A man who had abstained for a considerable time from food, because a voice had commanded him not to eat, suddenly returned to his ordinary habits, the voice having ordered him to eat. The reluctance to take food arises, in some cases, from hallucinations on the subject of money.

M. Brierre de Boismont, records 28 cases of puerperal mania, 18 of which presented hallucinations and illusions, and 3 manifested a suicidal propensity.

Dementia is frequently associated with hallucinations and illusions, which may last for years; they may then be, as in other forms of mental alienation, continued, remittent, or periodic.

In that form of dementia, accompanied by general paralysis, hallucinations are present in many cases, but only in its early stages.

The seventh chapter is devoted to the hallucinations of *intoxication*,

using the word in the generic sense, as comprising alcoholic drinks, certain gases, opium, haschisch, &c., &c.; and he observes, that the hallucinations, viz., visions of animals, reptiles, &c., &c., which are observed in delirium tremens, are not peculiar to it, but are met with equally, in the delirium produced by belladonna, datura stramonium, hyoscyamus, &c. In the observations on the effects of opium, our author draws largely from the confessions of an English opium eater.

In the eighth chapter, the hallucinations of catalepsy, epilepsy, hysteria, and hypochondriasis, are described. The following conclusions are arrived at :—

Hallucinations are rare in catalepsy, owing to the suspension of the intellectual faculties. The complication of epilepsy with insanity explains their greater frequency in epilepsy than in catalepsy. Hysteria is often marked by hallucinations, which may be compatible with sanity, or may be associated with mania, monomania, or dementia.

The fixity of the ideas in hypochondriasis, is favourable to the production of hallucinations. In chorea, hallucinations are observed, but principally in the acute stage. They have been frequent in epidemic chorea.

They have also manifested themselves in hydrophobia, in lead colic, and in many neural affections.

The hallucinations of febrile diseases are next brought under our notice. They may, in point of fact, complicate all diseases, or they may be, in some cases, their precursors.

The principal diseases in which hallucinations have been observed are inflammatory fevers, congestions, inflammations, diseases of the brain and its membranes, inflammations of the lungs, lesions of the digestive organs, typhoid fevers, the plague, intermittent fevers, gout, certain diseases of the heart, &c., &c.

We would gladly quote at length from the chapters which follow, in which subjects of surpassing interest are treated with great ability, but we are reminded of the length to which we have already gone. Passing over the chapters on hallucinations in connexion with history and religion, which are replete with information conveyed in the most attractive form, we shall devote a brief space to the subject of the treatment of hallucinations. The first question which is to be considered is that of isolation, or treatment at home. In some cases, separation from family and friends becomes a necessity; and in others, it is not expedient. The treatment is

divisable into physical and moral means ; and, to illustrate the subject, our author refers to cases.

The therapeutic agents which have been found most useful are blood-letting, baths, purgatives, and blisters, to which may be added, occupation and exercise.

In hallucinations with excitement, he has found general baths of six, eight, and even ten hours' duration, with irrigation, of great advantage.

With respect to blood-letting, he mentions one case in which it was productive of syncope, followed by blindness, but not by cure of the hallucinations. The unlucky patient was a physician.

In delirium tremens, with cerebral congestion, thirty leeches, applied along the sagittal suture, were beneficial. A powerful shock, physical or moral, has frequently been productive of the cure of hallucinations.

Medicinal agents effect a cure sometimes ; not by their therapeutic power, but by breaking the chain of ideas ; as, for example : opium, by producing sleep long protracted beyond the accustomed time. We can only briefly refer to some of the cases. A man believed he was exposed to magnetic influence, and that the magnetizer resided in his belly. With a view to divert his ideas, and to relieve the ailment of his stomach, of which he complained, two large blisters were applied to his legs. His countenance, which had been sad, soon assumed an appearance of gaiety, and, by the aid of the distraction produced by intellectual labours, the cure was completed.

A young lady, who was crossed in love, saw her lover everywhere—in the sky, at one time, and he spoke to her, and she responded. After a week she completely recovered, under the influence of a daily bath of four, five, and six hours' duration, irrigation of the head being employed at the same time.

The cure of hallucinations has been due to violent measures, which, in truth, humanity cannot approve. The douche, in the hands of Leuret, has been successful in compelling the insane to give up their hallucinations, admitting their absurdity. With others, the treatment has not had the same result.

The continued irrigation is far preferable to the douche. It may be practised by a streamlet or a number of streamlets falling for hours on the head, from a watering-pot ; after some hours of this treatment, patients have begged to be taken out of the bath, admitting that they had been deranged, but that now they were

cured. A young lady, after two hours of the irrigation, exclaimed to M. Brierre de Boismont: "Monsieur, faites moi sortir d'ici, cette eau qui me tombe comme, une pluie sur la tete, m'est insupportable. Vous l'avez fait parce que j'etais folle, je le sais; mais, Dieu merci, j'ai toute ma raison." Before complying with her request, he asked her what had become of the figure which had pursued her every-where She answered that it no longer existed; it was an illusion caused by her fever. In eight days she was restored to her family, perfectly well. Hallucinations of recent origin have been known to cease on the day, or the day following, admission into an asylum, such has been the effect of the mental impression.

Many parts of M. Brierre de Boismont's work have not been touched on; but we trust we have attained our object, namely, to excite an interest in the subject among our readers who may not have devoted much attention to the study of the phenomena resulting from the " mind diseased."

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*Return to an Order of the Honourable the House of Commons, dated 5th August, 1861, for Copy of the Papers relating to Quarantine. Communicated to the Board of Trade, on the 30th of July, 1861. Blue Book.*

In the 62nd number of this Journal, May, 1861, we gave a lengthened notice of two papers relating to quarantine and quarantine laws, copies of which had been returned to orders of the House of Commons, in May and August of the preceding year, and we then felt it our duty to speak in earnest terms of the arduous and most valuable labour which the " Quarantine Committee of the National Association for the Promotion of Social Science" had performed, in the compilation and digest of the evidence upon which those returns are based; and now we have the satisfaction of bringing before our readers a report founded on the evidence contained in the two parliamentary papers referred to. The present " Return" contains, first, some additional evidence and information respecting quarantine which had been communicated to the Board of Trade; and next, a complete digest of the numerous replies that were received by the committee in answer to the queries which had been issued at the outset of their labours, and which were transmitted to Her Majesty's Consuls, the Governors of Colonies, and

the principal Medical Officers of the Navy and Army on foreign
stations. Each of these queries is reproduced and illustrated, in
the order in which they stand, by copious details and practical
remarks, and the general conclusions to which the committee came
are stated, and which they " considered to be clearly deducible from
the evidence submitted to them;" the Report then winds up with
" a few simple recommendations on certain points of practice most
easy of adoption, and whose general adoption would, in our," *the
committee's* " opinion, insure immediate advantage." Of the elaborate
Report before us, we confess it would be very difficult to give any-
thing like the length of critical analysis to which it is entitled, and
we must, therefore, content ourselves by taking up some of the
most important of the conclusions at which it has arrived, and
glancing, hastily even, over them. Lest, however, these remarks
might lead the " committee on quarantine" to imagine we under-
value their labours, we beg to premise the remarks we intend to
offer with this assurance, that we hold to the statement we made
when reviewing the two first parliamentary papers on quarantine,
viz.:—" In fulfilling this arduous task, the quarantine committee
have performed a most valuable labour, having alike done good
service to the interests of commerce and to the cause of sanitary
science." Nay more, we may say, that if this statement were
applicable to the former undertaking of the committee, as it surely
was, it is even more so to the present, which is a full and practical
summing up of the evidence which had previously been collected,
and which has been so ably analyzed and digested.

The first inquiries that naturally suggest themselves to any one
taking up the subject of quarantine are—what is it? why has it
been imposed? and what have been its results? Now to these
queries we consider the inquirer will find conclusive answers in the
*Report of the Committee on Quarantine;* and we believe that any
one who will attentively, and without prejudice, study this Report,
will learn that quarantine is a fallacy, based upon very unsound
and most unscientific assumptions! That it has been, and is, imposed
upon false principles, equally at variance with equity, humanity,
and common sense; and that, as might be naturally expected, it has
failed in affording that protection from epidemic and contagious or
supposed infectious diseases, which it was ostensibly designed and
hoped to give: hence its results, as regards protection from disease,
are very uncertain, or have been proved to be nearly negative,
while the injury to trade and commerce has been positive and

undoubted.   On these several points we shall quote some illustrative observations from the Report before us; and first, as regards what quarantine really is—

"Many persons imagine that quarantine is a very simple affair, and that all which is meant or occasioned by it is the detention, for a limited time, and the purification of infected or suspected vessels, with their crews and cargoes, in consequence of the actual or recent existence of a dangerous contagious disease, either on board the vessel, or in the port from whence she sailed.   But this is far from the reality.   In a large proportion of the cases where quarantine is still imposed in many countries, not only no sickness of any sort has existed in the vessel during the whole voyage, but no instance of the disease, on account of which she is subjected to quarantine on arrival, was known to have existed for a length of time in her port of departure."   .   .   .   " In the majority, however, of cases in which quarantine is imposed, its alleged necessity rests upon, not a merely gratuitous apprehension, but upon the ascertained, or the rumoured existence of a dangerous transmissable disease in the port or country from which the vessel has last come."

" All on board, indeed, may have been healthy during the voyage, and may be so on arrival, but the fact of the vessel having come from an infected or suspected locality, is held sufficient to require that she, and every person and thing on board, should undergo a specified detention, for the protection of the public health.   The quarantine is directed against the *lieu de provenance*, or port of departure ; and this is the reason why it involves all arrivals therefrom without exception, whether sick or well ; although when sickness has also occurred on board, the quarantine is usually more stringent than when the vessel has remained quite healthy during the voyage."

The Report abounds in instances illustrative of the preceding statement, and moreover, shows over and over again, that in several countries, Spain and Portugal especially, the imposition of quarantine does not depend upon any supposed or alleged existence of disease in the nations from which the arrivals have come, much less upon any sickness on board; but is evidently enforced from political, and particularly, fiscal motives.   In Spain, Portugal, and some of the Italian States the most arbitrary and unequal laws exist relative to quarantine, and these laws are usually stringently enforced; but in France and Sardinia, on the contrary, whose existing quarantine codes are based upon the recommendation of the international conference held at Paris, the quarantines have, for several years, been mild in all cases; indeed the imposition of them at all seems to

depend more upon what neighbouring states demand, rather than
on any belief in the protective agency that quarantine affords to
the public health; and this statement also holds good regarding the
British possessions in the Mediterranean, but if we did not impose
in Gibraltar, for instance, nearly similar restrictions to those en-
forced by Spain, the consequence would be that that country would
close all communications with us! And, as stated in the Report—
" Were Spain to modify her sanitary restrictions, it would confer a
great benefit on Gibraltar."

The Report gives many examples of the want of equity with
which quarantine is enforced in several places. Thus, while at Vigo
the English packets from Southampton, with clean bills of health,
were subjected to quarantine upon some frivolous pretence; " at
Malaga, on two very recent occasion, certain authorities and persons
of rank arriving from places infected with cholera were admitted
immediately. A royal ordinance has been also issued, commanding
that troops and military stores coming from infected places, should
not be subject to quarantine." Surely such examples as these, and
there are several such in the Report, fully confirm the statement
we have made—that quarantine is usually imposed or enforced upon
false principles, at variance with equity and common sense.

With regard to the results of its imposition, we might refer
largely to the several parliamentary papers upon the subject, to
show that quarantine has proved quite abortive in affording pro-
tection from the plague, yellow fever, or cholera, the diseases
against which the most stringent portions of its absurd, often
iniquitous, code have been levelled. But we need not do more than
quote the following statement from the Report :—

" Many of the consular replies contain strongly expressed opinions of
the inconvenience and injury inflicted by the operation of the quarantine
regulations in force, while no real security is afforded to the public
health of the port or country. There appears to be a general distrust
and disbelief in the utility of the system, as at present pursued."

Such, we are satisfied, must be the conclusion at which every
intelligent and unbiassed observer must arrive; for nothing can be
more certain than this, that every one who has seen or has studied
the *modus operandi* of systems of quarantine, must have become
impressed with a thorough distrust in their operations, and has been
led to feel that the sooner such a gigantic fallacy is nearly, or com-
pletely, done away with the better; certainly for our own part we

must say, that after considerable experience of quarantine in several countries, and after witnessing the total failure of it to accomplish the objects for which it was ostensibly designed—the protection of the public health, and the prevention of epidemic disease—we have no hesitation in urging—either its entire abolition, or at least such a modification of its absurd code, diversified in each country according to the amount of ignorance that prevails—that the positive evils which it at presents generates shall not be allowed to continue! Every one, we would imagine, must agree with the conclusion of the committee on quarantine when they say that— "All unnecessary interruptions to international intercourse cause not only great personal inconvenience, but serious commercial loss;" a conclusion at which they have arrived from the ample evidence before them, which showed them that—

" *Great diversity and discrepancy exist in the system of quarantine* pursued in different countries," that—" Much of the practice still in force is certainly uncalled for, as regards the public health, and seems to be retained on fiscal, rather than on sanitary grounds;" again, that—" quarantine restrictions appear to have been sometimes resorted to from merely political motives, and to have been used as a pretext for the annoyance and detriment of other countries;" and one of the committee, Dr. Davy, very pertinently remarks—" It appears to be admitted that the preventive measures adopted by the governments of different states to exclude a contraband trade, have been more elaborate, and organised with greater care, with a view to efficiency, than any system of quarantine hitherto in use, and yet with only partial success ; and *this universally !* "

We have said that we imagined every one would agree with the conclusion of the committee which we have just referred to, but we feel we were lamentably mistaken, for one of the members of the committee, and a member also, we regret to say, of the medical profession, has submitted the following most extraordinary comment upon the preceding part of the Report:—" It is much to be regretted," writes Dr. Bryson, " that any relaxation of quarantine should have been made, but more especially in regard of yellow fever and cholera morbus; because, in consequence of the want of proper precaution, these diseases, within the last 30 years, have been introduced into countries where they were unknown before." We really do not know what are " the proper precautions" to which Dr. Bryson refers; if he means to say that the strictest quarantine has ever continued to save any country from the visitation of

cholera, we say, at once, that he attempts to propagate a grievous
error, and one too that strikes at the true basis of all preventive
medicine; he may be enamoured as much as he pleases with strin-
gent codes of quarantine laws, but we are happy to think that few—
very few of the well informed, at least, in these countries—will agree
with him in these untenable opinions, but will rather take the intelli-
gible views of the committee, which certainly lead to inferences the
very opposite to those he has expressed. The Report speaks as
follows:—" It does not appear that those countries in which
quarantine restrictions are most rigorous, and are most strictly
enforced, have hitherto been more exempt from the visitations of
the diseases against which quarantine is chiefly imposed, than other
countries where the regulations are more simple and less burden-
some;" and Dr. Davey adds, to the preceding, the following
comment:—

" And some countries, certain islands in the Archipelago, under
Ottoman rule, most exposed, have entirely escaped these visitations"!
But it is not, we contend, by the enactment of any system of
quarantine laws that epidemic diseases are to be prevented attack-
ing and spreading through a country, nor by the most stringent
enforcement of these laws; but by the careful study of sanitary
science, and its application to the preservation of health; and we
quite concur with the comment made by Mr. Farr—that " I am
unable to assume that the introduction of dangerous diseases can
be prevented by any quarantine regulations."

The committee having come to certain conclusions from the mass
of evidence, the Report is brought to a close by some practical
recommendations, the aim being—to amend and utilise, not to
discontinue or abolish the existing machinery of action. As a
general rule, it is recommended that all vessels which have been
free from sickness, and which have no malignant disease on board,
and are clean, should at once be admitted to free pratique, no
matter from what country the ships may have come. When
quarantine detention is deemed necessary from the existence of
malignant disease—actual or recent—a careful examination should
be made of the vessel, and of all persons on board, by the medical
officer of health; the healthy and sick should be separated, the
former not being necessarily detained, and the latter removed from
the infected ship as soon as possible. These recommendations are
humane and judicious, and stand out strongly in contrast with
existing practices, and also with some of the notions that are pro-

mulgated as comments upon the Report by one or two of the committee. Indeed, on the whole, the conclusions and recommendations are most important, practical, and in accordance with observation and common sense; such in fact, as we might have expected from the distinguished men who compose the committee on quarantine. The concluding section we highly approve of; it is as follows :—

" It would materially conduce to a thorough knowledge of the subject, and probably to the speedy adoption of a more rational and uniform practice generally, if the government of this country instituted an investigation into the results of quarantine, and the working of quarantine establishments, in the chief ports of the South of Europe and the Mediterranean, where the system is still in greatest force, in order to ascertain the actual truth by personal observation on the spot."

If such an investigation were made by honest and unprejudiced observers, it would be soon discovered that the system, as practised in the ports of the countries referred to, is one which is a disgrace to the enlightenment of the nineteenth century, that it is nefarious, as it is inhumane, is, and has been, utterly useless for the purposes for which it was designed, and, while it affords no protection to the public health, it militates against the advancement of real sanitary operations, and interferes with, and, in some instances, stops the progress of legitimate commerce and national intercommunication. We cannot close this brief notice without cursorily mentioning the Appendix, by Dr. Gavin Milroy, a gentleman well known as an enlightened and strenuous sanitary reformer; this Appendix gives a " historical sketch of quarantine legislation and practice in Great Britain," and is a most able exposition of the subject, showing the steady advancement, in this country, of sound views regarding the imposition of quarantine as protective of the public health, until the restrictions of that most unscientific system have become almost a dead letter, and there have been substituted in lieu of it sensible sanitary measures.

It is certainly much to be regretted, that other countries, generally, have not followed our progressive example; but we trust the time is not far distant when wise councils will prevail, and when the philanthropic exertions of the National Committee for the Promotion of Social Science shall have cleared away the mists of ignorance and prejudice which hang around the understandings of those who still cling to the wretched fallacy of quarantine.

*A Practical Treatise on the Use of the Ophthalmoscope.* By J. W. HULKE, F.R.C.S. Royal 8vo, pp. 77. London: Churchill. 1861.

AN instrument that has effected so thorough a revolution in ophthalmic surgery as the ophthalmoscope must, deservedly, be an object of interest to the medical profession in general, and to those members of it in particular who have made this branch of surgical science their special study. A standard work on the ophthalmoscope, written in the English language, has long been wanted; and although Mr. Hulke does not pretend to fill up the vacuum with the work we are at present noticing—laying it before the profession merely as an elementary treatise—still it is by far the most complete that has as yet been published on the subject in these countries, and we shall endeavour to notice, as briefly as possible, some of its most interesting points.

The author adopts Zander's classification of the different kinds of ophthalmoscope, viz.:—

" 1. Ophthalmoscopes in which the reflector consists of slips of highly polished glass with plane parallel surfaces—as Helmholz's and Follier's.

" 2. Homo-centric ophthalmoscopes, concave mirrors of silvered glass or metal—as Ruete's and Liebreich's.

" 3. Hetero-centric ophthalmoscopes, plane or convex specula, in combination with a convex lens—as Coccius's and Zehender's. The prismatic ophthalmoscopes, which are but little used, fall under this class.

In every ophthalmoscope three principal conditions must be fulfilled:—1. It must be able to give a sufficiently bright illumination of the fundus; and 2. This in such a manner that the examiner's eye can be brought into the line of the rays incident upon the eye under examination, or nearly so, in order that it may receive the reflected rays returning from the latter. 3. It must provide for the proper accommodation of the examiner's eye, so that this can produce a distinct image of the part of the examined eye.

The images seen with the ophthalmoscope are of two kinds:— 1. A real inverted aërial image, situated in front of the eye examined; and 2. An erect, virtual, geometrical image, which may lie in front of the eye examined, or behind it. The observation of these inverted and erect images of the fundus is termed the examina-

tion by the indirect and the direct method. In the indirect method the objects are less magnified, the portion of the fundus seen at once is larger, and a better idea of the relative position of its parts is gained; this method of examination is also the more easily acquired. The direct method gives greater enlargement, but a smaller portion of the fundus is comprehended in the field; it is therefore better fitted for the investigation of minute details than for obtaining a general view. Thus each method has its peculiar advantages, and the selection of one or the other must depend on the work required of it.

As the ophthalmoscope has been very appropriately termed an eye-mirror—*Augenspiegel*—by its German inventor, so also are the terms employed to denote the various modes of employing it of German birth. When the examination is conducted in the original manner, described by Helmholz, with a glass reflector and concave lens—*i. e.*, the upright image produced—it is styled in England, as in Germany, examination by the upright or direct method—*die Untersuchung im aufrechten Bilde*. When a metallic reflector and bi-convex object lens are employed—*i. e.*, the inverted image of the fundus produced—it is called, in Germany, examination in the inverted image—*die Untersuchung im umgekehreten Bilde*. This is styled by Mr. Hulke the *indirect* method of examination. We must confess we are disposed to find fault with this term, inasmuch as it seems to us calculated to mislead the student, as if the eye itself were not directly examined, but had to undergo a preliminary or intervening process before a diagnosis could be made. We consequently think that as the study of the instrument is but as yet in its infancy in England, the more clear and unequivocal the technical terms employed the more readily will a due appreciation of the subject be arrived at by the student. We would, therefore, suggest examination by the inverted method as a more appropriate term.

The direct method of examination was the original one discovered and recommended by Helmholz; but before we enter into an explanation of it we shall give a brief sketch of the instrument itself. Helmholz's ophthalmoscope, says Mr. Hulke, is a short blackened metal tube, closed at one end by a plate centrally perforated, which supports a hollow, triangular, prismatic metal box. The base of this prism is connected with the plate by a short open cylinder, in such a manner as to allow the rotation of the prism on the axis of the tube. The long side of the prism contains the reflector, com-

posed of three plane polished slips of glass, inclined at an angle of 56° to the axis of the tube, the other end of which contains a concave lens, which is held in position by a friction tube. In order to examine an eye with this instrument the patient must be placed in a darkened room, and seated on a level with the examiner, the lamp being placed on the same plane, and a little posterior to the eye that is to be examined. The rays of light from the lamp falling on the glass reflector which is held close to the eye, are reflected into it, so as to sufficiently illuminate the fundus, which will then present a brilliant red colour. Some of the rays returning from the eye under examination to the glass reflector, pass through it, others are reflected back again to the lamp. But as a normal eye can only produce images with diverging or parallel rays; and as these returning rays are converging, Helmholz was obliged to interpose a concave lens between the reflector and the examining eye, thus rendering them parallel or divergent, forming an erect image on the retina of the observer. Mr. Hulke's objection to this instrument is, that it reflects too feeble a light into the eye, so that the fundus cannot be sufficiently illuminated. It has, however, been modified by Edward Jäger; and we think that in its modified form it is eminently adapted for the examination of all cases in which an over-sensibility of the retina exists.

Zehender, not satisfied with the illumination afforded by Helmholz's ophthalmoscope, invented an instrument, also for examination by the direct method. This consists of a convex metal speculum in combination with a bi-convex lens, which is of shorter focal length than the negative focal length of the speculum. The clip which holds this lens is mounted on a jointed bracket which turns right and left on the short handle of the speculum. A clip for an ocular lens is hinged to the side of the frame. Mr. Hulke prefers this instrument to that of Helmholz, as it gives a superior illumination; he finds it, however, less easy to manage.

In the direct method of examination (observation of the erect geometrical image), where both eyes are emmetropic, and their accommodation is suspended, if the surgeon bring his eye very close to that of the patient it will receive parallel or even diverging rays from the fundus of this, which it can unite in an inverted image upon its own retina; and this image will be mentally projected, as an enlarged, erect, geometrical one, apparently situated behind the patient's eye. But should the patient or the surgeon be myopic, a concave lens will be necessary, in order to give the reflected rays

the requisite parallelism or divergence; and this may be placed either before or behind the speculum.

The author remarks that, in order to examine an eye by the direct method, the pupil should be fully dilated, and the accommodation paralysed with atropine. This is not necessary in all cases. In Berlin and Vienna there are large classes for the purpose of ophthalmoscopic study, conducted by Liebreich and Edward Jäger; and it is only in exceptional cases, such as where there is an extraordinary degree of myosis present, that atropine is had recourse to; in fact the professors take particular pains in impressing on the students the very small number of cases in which dilatations of the pupil is necessary.

In Berlin the inverted method of examination is more frequently employed than the direct. In Vienna just the opposite. Both methods are, however, from time to time employed at each of the above-mentioned celebrated cliniques. Still the mode of examination at present most in vogue, both in these countries and on the continent, is by the inverted method, and the instruments most frequently employed for this purpose are the inventions of Von Graefe's assistant, Liebreich. There are two of these, a large and a small one, both made by Paetz and Flohr, of Berlin. The large one consists of two tubes, one sliding within the other by a rack and pinion. The tube next the observer contains the speculum, which swings vertically on trunnions revolving in the clips in such a way that it can be easily removed and replaced. A portion of this tube is cut away, in order to admit light to the speculum, behind which there is a narrow slit for a convex ocular lens of low power. The tube next the patient contains a convex lens of about two inches focal length, swung in the same manner as the speculum. This tube is encircled by a stout collar, which slides on a vertical rod, so that the whole can be fixed at any convenient height. The lower end of the rod has a clamp for fixing to a steady table. Above, the collar bears a graduated, horizontally-sliding rod, ending in an oval plate, against which the patient steadies his forehead. Additional steadiness is gained by a chin-rest. A small brass tube, mounted on a jointed bracket, forms a convenient object for the patient to fix his eye upon. A couple of small blackened tin shades cut off the direct rays of the lamp from the patient's and surgeon's eyes. This is an excellent instrument for demonstrating cases to a class. We have seen from 15 to 20 students, one after another, examine the details of the ground of the eye with it, in the space

of a couple of minutes, and without causing the slightest uneasiness to the patient.

Liebreich's small ophthalmoscope is a concave metal speculum, one inch and a quarter in diameter, and of about four inches focal length, pierced by a central sight-hole, the diameter of which slightly exceeds one line. The margin of this sight-hole is a thin blunt edge. The speculum is set in a metal frame, to which a light handle is attached; and a small clip for an ocular lens is hinged to the frame in such a manner that it can be folded against the back of the speculum on the sight-hole.

The explanation of the mode of using those two ophthalmoscopes is as follows:—The rays of light from the lamp, incident upon the metal speculum before the eye of the observer, are reflected convergingly towards the patient's eye. Before reaching this they are intercepted by a bi-convex lens of short focal length, which increases their convergence, so that they intersect at a point anterior to the patient's retina, and illuminate the fundus with dispersed light. The pencils of returning rays from this circle of dispersion would meet at a distance from the patient's eye equal to its anterior focal length; but, passing through the bi-convex lens, they converge to earlier foci, and form an enlarged and inverted image, visible to an observer's eye at the sight-hole of the speculum. In order to explore the refracting media of the eye the speculum alone should be used; and the result, remarks the author, when these are perfectly healthy, is negative. Small threads of mucus or beads of froth on the front of the cornea sometimes mislead persons unaccustomed to the use of the ophthalmoscope; the illusory appearances they produce vanish when the cornea is swept by a winking movement of the eyelid.

The optic nerve piercing the sclerotic and choroid, a little below and to the inner side of the axis of the eyeball, is brought into view when the cornea is turned slightly towards the middle line, because this is attended by a corresponding outward movement of the posterior pole of the globe. The colour of the optic disc and the distinctness of its outlines depend on the amount of blood circulating in it, on the mode in which the large vessels traverse it, the degree of illumination by which it is seen, and very much on the colour of the adjacent fundus. With regard to the shape, conicity, &c., of the optic disc there were, until very recently, a great number of opinions on the subject, all differing more or less from each other. Thus the term optic papilla was given to it, because it was

at one time believed that it projected into the vitreous humour in
the form of a cone; and some French writers still believe this to be
the case. On the other hand a celebrated German authority
declared that, instead of an elevation being present, there was in
reality a depression, and he based his opinion on the result of *post
mortem* examinations. Mr. Hulke says the optic disc rises very
slightly above the general curve of the fundus oculi, and does not
project into the vitreous humour in the form of a conical papilla, as
it was formerly thought to do. Its centre is even slightly depressed
where the nerve fibres are deflected on all sides towards the retina,
and its circumference alone is slightly raised when the aggregate
nerve bundles of the entire retina bend round the margin of the
choroidal foramen. This is the view now taken of the subject by
the greater number of writers both in England and on the con-
tinent; the depressed optic discs observed at *post mortem* examina-
tions being in reality a diseased state, now well known under the
term excavation of the optic nerve.

The phenomena of venous and arterial pulsation which the author
states are seen at the optic disc, are seldom or never so easily distin-
guished in the healthy human eye as one might be led to suppose
from the manner in which he describes them. As a general rule
no pulsation whatever is observed in the retinal vessels of a healthy
human eye except when pressure is made on the eyeball. If we
take a healthy human eye, or the eye of an animal, and subject it
to ophthalmoscopic examination, in all probability no pulsation
whatever will be seen; if, however, we make slight pressure with
the finger on the eyeball, we immediately observe pulsation in the
vein, which is larger than the artery, and of a darker red, almost
approaching to a crimson colour. If we press the eyeball a little
more firmly the venous pulse becomes small, the optic disc assumes
a blanched appearance, and the arterial pulse becomes visible. By
still further increasing the pressure we may cause the arterial pulse
to disappear completely. It was the discovery of the fact that
pulsation of the retinal vessels was the result of increased intra-ocular
pressure that led Von Graefe to propose iridectomy as a cure for
glaucoma. In describing the red colour of the fundus of the living
eye, the author remarks that this has been ascribed to the reflection
of red light by the vascular nets of the retina and choroid, and par-
ticularly by the chorio-capillaris, but strictly it is chiefly due to the
colouration by the choroid of the light returning through it from
the inner surface of the sclerotic. The colour of the fundus of the

living eye varies so much in different persons that we do not remember to have ever examined two individuals in which it presented the same identical shade. In the dark-complexioned inhabitant of southern Europe—particularly in Spain and Portugal—the fundus is generally of a dark-red colour; while in the negro it presents almost a reddish-black appearance; in albinos, on the other hand, it is always of a faint pinkish colour. As a general rule, the younger the person the lighter will be the colour of the ground of the eye. We can well believe the author when he states he has hitherto failed to recognise the chorio-capillaris. We confess we have seldom seen it except in persons of very fair complexions; and even in them it was exceedingly indistinct. When there is even but a moderate quantity of pigment present it is altogether impossible to distinguish the very minute meshes of this structure.

With regard to the abnormal appearances presented by the human eye when subjected to ophthalmoscopic examination, the author has entered fully into the subject, quoting largely from French and German writers. There is one statement, however, which he makes, in speaking of opacities of the capsule of the lens, which somewhat surprises us. He says:—

" Opacities upon the anterior capsule of the lens (*which itself never loses its transparency*) consist, for the most part, of lymph and pigment derived from the iris. The pupil, when dilated, is indented, and its margin is tied by fibrous cords, which often branch as they spread out on the lenticular capsule; such cords have a pearly, silky texture, or are coloured with uveal pigment. They do not reach quite to the centre of the lens, but start from points in a circle, which corresponds to the position of the pupil at the time the lymph was poured out."

Mr. Hulke seems to have followed up the error of Malgaigne, who was in the habit of exclaiming before his class, " Examinez une capsule cristalline, chez tel cataracté que vous voudrez, lavez la avec precaution; vous la trouverez toujours aussi transparente que Dieu l'a faite." That this was assuredly an error, the microscope has since proved beyond all doubt; and it is now almost universally admitted that there exist veritable opacities of the capsule; that is to say organic modifications peculiar to it, apart from the opacities which adhere to its anterior face. During our attendance at Professor Arlt's *clinique*, in Vienna, we had an opportunity of seeing that gentleman extract a capsulo-lenticular cataract, both the lens and its capsule being completely opaque; and he

called the attention of his class to the fact that the opacity of the capsule was not caused by any deposit on its anterior surface, but was the result of an organic alteration in its structure, which he proved by first washing the capsule, and then placing it under the microscope, when each student present had an opportunity of examining for himself, and forming his own opinion on the subject; and we ourselves entirely acquiesced in the correctness of the professor's statement. The same distinguished oculist also lays down distinctly in his book on diseases of the eye, that there are two kinds of capsular cataract, viz., that resulting from a deposit on the anterior surface of the capsule, and the other as an alteration in the structure of the capsule itself; he has also in his possession a number of thickened, opaque, cartilaginous capsules, which he has extracted from time to time in his practice, and which we ourselves have seen; and he states in his lectures that a year never passes without several cases of the same kind coming under his observation.[a]

On referring to Mackenzie's work on eye diseases we find the following passage. Speaking of capsular cataract, he says:—" On operating I have sometimes found these specks (*i. e.*, deposits on the anterior surface of the capsule) to separate readily from the capsule on being touched with the needle, and to fall forward through the dilated pupil into the anterior chamber. In most cases the deposit appears to be in the membrane, not on it merely; its texture is thickened and opaque throughout."

The author gives an excellent description of a diseased state known in this country by the name of " floating retina,"[b] with which, before the invention of the ophthalmoscope, we were but very imperfectly acquainted. Alluding to the manner in which it commences, he says:—

" It has been very generally thought that the detachment always begins at the lowest part of the fundus, near the equator; and it may be safely said that it is generally first observed in this locality; but the possibility always remains that the fluid beneath the retina, at this part, has merely gravitated here, having been originally poured out at a higher part of the fundus. This is supported by a case on which I observed the subsidence of a portion of detached retina lying above the optic nerve entrance, simultaneously with the appearance of a fresh detachment below the nerve

[a] *Vide* Arlt über die Krankheiten des Auges.

[b] In France it is termed " decollement de la retine;" and in Germany " Ablösung der Netzhaut."

at the equator.   Similar cases have been recorded by V. Graefe.   And
it is probable that the occurrence would often be noticed if cases of
detached retina generally came under our notice at an early stage.   But
this does not commonly happen ; for the separation creeps on so insi-
diously—being unattended with pain or any external signs of mischief—
that sometimes the lower hemisphere of the retina is stripped off from
the choroid before the patient is aware that anything is wrong with his
eye ; and indeed the discovery is sometimes made accidentally by closing
the sound eye."

The different diseased states of the eyeball, made visible by means
of the ophthalmoscope, are elaborately entered into and illustrated
in this very valuable treatise.   The illustrations reflect the highest
degree of credit on both author and artist; and we can confidently
recommend the work to the profession as the best English guide
that has as yet been published, to the study of a most useful and
truly important branch of ophthalmological science.

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*On the Treatment of Fracture of the Lower Extremity of the Radius.*
  By ALEXANDER GORDON, M.D., L.R.C.S. Edin., &c.   Belfast:
  Alex. Mayne.   pp. 15.

THIS is a very clever *brochure* on the treatment of a frequently
occurring accident.   The plan of management recommended differs
from all those hitherto advised by surgical writers, and has much
in it to make it worthy of careful consideration :—

  " I have no hesitation whatever," says the author, " in stating that the
methods of treatment which have been hitherto pursued in this common
accident have failed.   .   .   .   They do not afford such a solid support
to the radius as is requisite for the restoration of its natural form ; nor,
if the form be restored by coaptation, will they maintain it until firm
osseous union has taken place."

Dr. Gordon gives a good description of the deformity, and of the
physical signs which characterise this fracture.   He passes in review
the plans of treatment described by Dupuytren and Nelaton, and
gives good reason for rejecting them; and, at p. 8, describes his
own splint thus :—

  " The splint which I use has attached to its radial border a piece of
wood, so bevelled that it fills up, and fits accurately, the natural concavity

of the radius. The fracture renders the palmar surface of the radius convex instead of concave, its normal form. The surface of the attached piece of the splint is also convex, and covered with tow, a piece of spongio-piline (the best material), or some other soft substance. The splint being thus covered is then applied to the fore-arm. The convexities of the splint and radius are mutually brought into apposition; about half an inch, or perhaps a little more, of the lower end of the radius is unsupported, because of the alteration in its form. A thick pad, similar to that used by Nelaton, is now applied over the posterior surface of the carpal fragment of the radius and carpus, and over this a splint, extending from the upper and back part of the fore-arm to the metacarpus."

He then describes the action of the splint, and gives cases to prove its efficiency. The intention to be fulfilled by Dr. G.'s splint is admirable, and has been carried out in the most satisfactory manner, for many years, at the Meath Hospital, in this city, in a much simpler, and in at least as efficient a manner, by the plan first introduced by the late Sir Philip Crampton. Dr. Gordon differs from all preceding writers in recommending the fore-arm to be kept in the prone position, but in this, as well as in the preserving of the arch of the radius, he was anticipated by at least 30 years by the practice of Sir P. Crampton. The "bevelled piece of wood" for a support to the lower portion of the upper fragment, is highly to be commended, and worthy of adoption.

Dr. G. does not attach sufficient importance to the displacement of the hand towards the radial side, and the projection of the lower extremity of the ulna inwards; and there is no provision in his apparatus for remedying this deformity. The shortness of the under splint, and the leaving the hand unsupported is objectionable. Certainly the upper splint, with the pads to depress the hand, will give some fixedness to the wrist, but not such as is obtained by an under splint sufficiently long to support the hand.

When the injury under consideration, long known as " Colles's fracture of the radius," is treated in the following manner, it may be so remedied that no deformity whatever will be left to point out that the bone was ever broken.

A splint is prepared a little broader than the fore-arm, tapering from above downwards, so as to suit the outline of the limb, and long enough to extend from the elbow to the phalangeal extremities of the metacarpal bones; it is to be cut away obliquely, at an angle of 45 degrees, so that the hand, when laid upon it, is given an inclination towards the ulnar side. There is no necessity for any

other splint. A thin pad is laid on the splint; then a wedge-shaped compress, or cushion of lint, sufficiently large to fill up, or rather to restore, the natural hollow which ought to exist above the wrist, is applied. The hand is then bandaged down to the lower extremity of the splint; and, in recent cases, the lower third of the fore-arm is left exposed for the application of leeches or lotions; the upper two-thirds are fixed to the splint by a roller, and in two or three days the roller is applied continuously from the hand up to the elbow. The advantages of this method are, that we not only preserve the arch of the radius, and restore the hand to its natural position, but, by supporting the hand, relieve the patient from much discomfort, and can dispense with the posterior or dorsal splint.

A surgeon states that he tried Dr. G.'s splints, prepared exactly as recommended by him, but the patient could not bear them from the want of sufficient support to the hand.

The late Sir Philip Crampton, aware of the importance of pre-serving the arch of the radius, proposed to have splints made of " Sparks' patent leather," or common sole leather, moulded upon casts taken from well-formed fore-arms. These being kept of different sizes could, with a little padding of raw cotton, or white wadding, be accommodated to limbs of various sizes. No doubt a well-fitting splint of this kind would be the most efficient and the most comfortable one the patient could have. The leather should rise sufficiently high on the radial side, to ward off the pressure of the bandage from the bone. This object is attained by Dr. G. thus. He says, p. 14:—

" On the radial side it (the splint) should project beyond the radius; and the bevelled piece for filling up the concavity of the radius should be attached half an inch at least internal to that border. By this arrange-ment the ulnar side of the fore-arm sustains the pressure of the bandage or straps. The reverse is the case on the radial side. The radial border of the splint alone is pressed upon; this pressure forces the bevelled portion inwards upon the concavity of the radius, and pushes it back-wards, while, at the same time, the outer border of the radius is protected from pressure."

This desirable object has been obtained in another way by the following device, which has been occasionally used in the Meath Hospital for some years, and which not only keeps the radius from pressure, but retains the prism-shaped pad in its place:—A thin slip of wood is secured to the radial side of the splint, and extends

from the wrist about five inches up the arm; it should be sufficiently high to reach just above the outline of the radius; this will effectually protect the radius from pressure, and will throw it upon the ulna, so as to keep it firmly down to the splint.

Dr. Gordon deserves great credit for the valuable pamphlet he has published, and for calling attention to this method of remedying the deformity resulting from " Colles's fracture." All that we have said only confirms the soundness of his views with regard to the cause of the deformity, and the manner of relieving it. We sincerely wish that his pamphlet may have a wide circulation; but we thought it due to him who has departed from amongst us to allude to the plan of treatment initiated by him, and to which that of Dr. Gordon bears, in the intention to be carried out, so striking a resemblance. Sir Philip Crampton, though he never wrote an account of his plan, yet gave it a considerable amount of publicity by practising it in a large hospital, before numbers of students, for many years.

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*Manual of the Dissection of the Human Body.* By LUTHER HOLDEN, F.R.C.S., &c. Second Edition. Illustrated. pp. 576. London: Churchill.

UNQUESTIONABLY the most reliable test of the real value of any literary production, is its appreciation by those for whom it is intended: hence, we judge that the demand for the Second Edition of Holden's Manual, is a compliment far superior to any which lies in the power of a reviewer to offer. However, the work has been placed in our hands for inspection, and we shall proceed to state, candidly, the opinion which we have formed of it on careful perusal:—

Of the general style, we have much to say in commendation. The system of arrangement is admirable; the facilities of reference abundant; and the diction throughout is clear, bold, and concise; admirably suited for the student of anatomy, who, unfortunately, in too many instances, is not alone daunted by the stupendous task before him, but puzzled and disheartened by the obscurity of the works which are intended to assist and lighten his labours.

Nevertheless, although we feel it a pleasing duty to praise Mr. Holden's Manual, we are not, by any means, prepared to grant that

it is all the student needs to assist him in learning anatomy; or the practitioner to refresh his memory, and suggest to him in difficulty. Books and the knowledge they can give, as well as other aids to science, are viewed differently according to the circumstances, dispositions, and preconceived notions of the beholder. The half fledged student sees only in anatomy and physiology the "bugbear" of his final examination, and eagerly cogitates how he may "cram up" the requisite amount. The vast majority of practitioners think of it, merely in reference to palpable necessities, and cast aside as superfluous, all which does not bear immediately upon daily routine. The true disciple of Medicine, however, cannot view the study of anatomy and physiology otherwise than as the real and indispensable key to all knowledge, and as such, pursues it untiringly, satisfied that every advance in its elucidation, howsoever transcendental it may appear, will infallibly confer benefit on his fellow-creatures, and distinction upon himself. It is needless to recall instances to illustrate the truth of this position—we would rather challenge those who may dissent, if such there be, in real earnest, to bring forward one single fact to gainsay it. The opinion formed of Holden's Manual—the work at present under consideration—will vary according as the umpire belongs to one or other of the classes of observers sketched above. For our part, we are disposed to think that it is best suited for a hand-book for the junior student; that it is less useful as a reference for the practitioner; and wholly deficient for those who seek to advance the profession of their choice, by a comprehensive and philosophical study of the groundwork upon which its fabric rests.

Mr. Holden's works, as far as they go, are remarkable for clearness, and for the degree in which they simplify the subjects treated. His work on Osteology, although open to improvement in many respects, has proved a real boon to students; and the new edition of his Manual will, undoubtedly, do no less in many respects. Yet, we feel surprised that, from a work avowedly intended for students, there are omitted a vast number of those devices which experience proves to be valuable aids in teaching anatomy. For example, in the demonstration of the neck, where the parts of importance are numerous and difficult to understand in their mutual relations, we have invariably found that, to define with brevity and accuracy the triangles, their linear boundaries, the exact formation of their floors, and finally, to give a concise account of their absolute contents, properly classified, so materially aids the student as to

reduce his labour to a very moderate one. A proper subdivision of certain of these spaces, likewise, aids the learner considerably. For example, the digastric space taken as a whole, from the number of parts contained, taxes the memory seriously; whereas, if the portion superficial to the mylohyoid muscle be considered apart from the portion deeper than it, then the whole difficulty is at an end. The first is the submaxilliary space proper; the second is the sublingual. The necessity for this subdivision is acknowledged in the work before us, by the introduction of two wood cuts, (Figs. 4 and 5,) representing each of the spaces in question. The posterior division of the digastric space, into which may be thrown the remarkable fossa which accommodates the parotid gland, is glanced at but superficially; and the relative anatomy of the great vessels of the neck is, for the most part, given much less completely than we consider desirable.

Passing to the description of the heart, we are surprised to find no mention of the safety-valve action of the right auriculo ventricular valves, a wise and indispensable provision of nature, first alluded to by Hunter, and more fully elucidated by Mr. Adams, of Dublin, and Mr. King, of London. The description of the larynx, however, is excellent; and the mode of explaining and delineating the action of the muscles is most ingenious and useful. Looking to the dissection of the upper extremity, we find the anatomy of the pectoral region given admirably; but, to criticise, rather too briefly, considering its importance in a practical sense. There exists, moreover, a strange laxity in the terms in which the muscles are described. For example—the subclavius muscle is stated to arise from the cartilage of the first rib, and to be inserted into the under surface of the clavicle; but it is not stated *at what portion of the clavicle* it is inserted. The relative anatomy of the muscular system is very defective, and the action of the various muscles too sparingly described. For example—the action of the pectoral muscles in forced respiration is totally omitted; and the action of the capsular muscles (as such) of the shoulder joint, shares a like fate. Again, the remarkable mode of origin, insertion, and obvious subdivision of the serratus magnus is passed by unnoticed. In the description of the axillary artery its relations are too briefly given, and its divisibility into stages—a decided assistance to the student— is omitted. In Fig. 44, which represents the bend of the elbow, the semilunar fascia given off by the biceps tendon is by no means clear; and yet its importance with reference to venesection is considerable.

We cannot fully approve the rule laid down at this point for bleeding. Experience in the dissecting room has shown us the great frequency of irregularities in the brachial artery, and we have come to the conclusion that careful palpation to ascertain its position is the only reliable safeguard to the surgeon. Fig. 45 is a pretty diagram of the anastomosis at the bend of the elbow, on the same plan as Fig. 7, which shows the inosculations of the subclavian artery. We are disposed to think that these diagrams would be much clearer if outlines of the skeleton were added. Without this they are somewhat obscure—at least to the junior students, for whom they are intended. The anatomy of the fore-arm and hand is admirably done, on the whole; but we are inclined to reject the guide recommended for ascertaining, on the undissected hand, the exact position of the superficial palmar arch—namely, a line drawn horizontally across the palm at the junction of its upper with its middle third. We consider that, a much safer and more accurate indication is the line visible on every palm, leading from the metacarpo-phalangeal articulation of the index finger to the pisiform bone. The descriptions of the articulations of the upper extremity are given in very rapid style, and, of necessity, there are many omissions. Among others we may mention that of the gleno-humeral or intra-articular ligament of the humero-scapular articulation, a description of which was published in the *Lancet* (1829–30), by the late Mr. Valentine Flood. On turning to the abdominal muscles, we are greatly surprised at the brief manner in which we find them disposed of. In fact, it is beyond our comprehension how any student could learn to understand this difficult passage of anatomy solely from the means here placed at his disposal. The description of the anatomy of inguinal hernia is likewise very insufficient. Obvious and palpable layers of fascia, which form coverings, are passed without mention; and many highly practical points connected with the abdominal pouches are contemptuously neglected.

Among numerous omissions hereabouts we may quote the absence of all remark explanatory of the utility of the triangular ligament given off from the inner insertion of Poupart's ligament, in opposing the protrusion of a direct inguinal hernia. Moreover, strangely enough, Mr. Holden, who appears to understand better than most authors the true anatomy of this ligament, forgets to ascribe its earliest notice to the late Mr. Colles of Dublin. This omission surprises us the more, because throughout the Manual a vast amount of learning is exhibited in the abundant references to the various

authors who have written upon anatomical subjects. To a succinct account of the abdominal cavity and its contents follows the description of the perineum and generative organs in both sexes. This most important portion of Mr. Holden's work is executed with admirable clearness and simplicity. We have but one fault to find with it, and that is with the illustrations. It is true they may answer as diagrams; but we cannot see the object of representing parts in grotesque disproportion. The anatomy of the lower extremity is next considered, and is introduced by an excellent account of femoral hernia. There are certain anatomical points concerning femoral hernia on which we unhesitatingly differ from the author. Nevertheless, where there is any ground for discussion we would not presume to urge our own opinions. We cannot understand Mr. Holden when he says, that he never could find that membranous partition between the abdomen and thigh which Cloquet described as the "*septum crurale.*" Occasionally it is badly marked; but we have recently demonstrated it several times, and exhibited it on the subject as plain and undeniable as Scarpa's fascia, or the deep layer of the superficial fascia of the groin—a structure to which Mr. Holden makes no allusion whatever. We observe other points of dissent; but their discussion would carry our review (already somewhat lengthy) beyond reasonable bounds. The articulations of the lower extremity are disposed of in an amazingly brief style; and not only with omissions, but errors also. For example—there are several mistakes in the description of the ligamentum teres of the hip joint. In the first place, the branch of the obturator artery which supplies it *does not go* to the head of the femur. The careful injections of Hyrtl, of Vienna, have disproved that notion. Again, the view advanced by Weber, and adopted by Mr. Holden, namely, that the ligament is tense in the erect position of the body, and therefore limits the movements of the pelvis, is erroneous. In the erect posture it is *absolutely relaxed.* Neither does it limit rotation, as described in the work before us, but merely rotation outwards *when the thigh is flexed.* These errors surprise us, because the student is recommended to inspect the ligament by removing the floor of the acetabulum. Such a dissection, which was long since made by Struthers, of Edinburgh, and Humphreys, of Cambridge, instantly demonstrates the errors of the description given in the Manual.

The lower extremity concluded, the dissection of the nervous centres—the brain and spinal chord, is undertaken. The clear and

simple manner in which this is done must strongly recommend itself to the learner, as well as the diagrams illustrative of this complex portion of anatomy, which are original, ingenious, and useful.

In conclusion, we feel bound to confess the general satisfaction with which we have made acquaintance with Mr. Holden's contribution to the literature of anatomy, and to congratulate warmly the student commencing his labours on the valuable handbook and companion in the dissecting room now placed at his disposal.

On the style in which the book is brought out we need make no comment. It will suffice to remark that it fully sustains Mr. Churchill's reputation.

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*The Modern Pathology and Treatment of Venereal Diseases.* By PATRICK HERON WATSON, Assistant Surgeon to the Royal Infirmary, &c. Edinburgh: Sutherland and Knox. pp. 39.

*On the Relative Influence of Nature and Art, in the Cure of Syphilis.* By THOMAS WEEDON COOKE, Surgeon to the Royal Free Hospital, &c. London: Renshaw. Pamphlet, pp. 64.

*On the Successful Treatment of Gonorrhœa and Gleet, without Copaiba.* By THOMAS WEEDON COOKE, Surgeon to the Royal Free Hospital, &c. London: Renshaw. pp. 32.

THE first pamphlet is a reprint of a very able review, which appeared in the *Edinburgh Medical Journal*, some time back. It consists of two parts—the first, which treats of gonorrhœa, will meet with very general approbation. The views of John Hunter on the identity of the gonorrhœal and syphilitic poisons, are now being so universally given up as untenable, that no laboured argument is needed to overthrow them. The purely local character of gonorrhœa and its incapacity to produce chancre by inoculation, are now accepted points. Almost equally accepted is the fact, that every portion of mucous membrane is capable of gonorrhœal inflammation, and that wherever it commences in the urethra it is liable, if unchecked, to pass back through the entire canal, and thence, by the vas deferens to the epididymis; differing nothing in this from any other inflammatory affection in the neighbourhood, for we not unfrequently see orchitis resulting from inflamed prostate or bladder. Holding these

views fully, it is natural that the bent of his (Watson's) mind, should be towards a local treatment, and that he recommends the use of astringent injections, largely diluted at first, and increased in strength as the diminution of irritability may dictate. Still he clings, somewhat needlessly, as we think, to the "dirty, nauseous, and permeating drugs, copaiva and cubebs," attributing to them, however, only the local action through the urine, which Ricord has demonstrated to belong to them. In gonorrhœal ophthalmia he adheres to Guthrie's ointment, and the solid nitrate of silver pencil; for ourselves, we have seen more benefit from a half hourly injection of a very weak solution—gr. $\frac{1}{2}$, or even less, to the ounce—than from the heroic plan; nor can we understand why a weak astringent is recommended in the case of the urethral inflammation, and a strong one for the same condition in the conjunctiva. The results, however, are the grand test of a theory; and since we have put in practice the repeated weak injections we have never lost an eye, though dealing with some cases of formidable severity. The rule which we have more than once laid down, with reference not only to gonorrhœal, but to all inflammation, and to the internal as well as the external application of remedies, is—the more acute the inflammation, the more diluted and the more frequent should the application of the remedies be; and the more chronic the inflammation, the stronger and less frequent. This rule approaches to a law in its invariable certainty, and is applicable to a multitude of cases which, at first sight, have no apparent connexion with one another.

We now turn to Mr. Watson's second part, which treats of syphilis. If Carlyle has truly said that the History of the French Revolution has been written in hysterics, with how much greater truth may this be said of syphilis. No man seems to approach syphilis content to observe, and not to generalize. Mr. Watson is no exception—he dogmatises with a vengeance—he is a strenuous upholder of the doctrine of the diverse nature of syphilis. In his pages we find very pretty descriptions of " The simple *soft* non-infecting chancre ; and the *indurated*, the infected, the Hunterian chancre, the *chancre* proper, with its *inevitable* syphilitic infection." The characteristic suppurating bubo of irritation, which accompanies the former, and the gland or glands of stoney hardness which are the mark of the latter, are also very neatly described. Destruction by powerful caustics is recommended for the one sore ; a prolonged exhibition of mercury for the other. A denial of a power in secondary syphilis to infect, is also prominently put forward. The

only possible objection to such pretty theories, is their inconsistence with every-day facts—but, even here Mr. Watson is triumphant. Has any man observed secondary syphilis result from a soft chancre? forsooth he has overlooked the hard stage, or a concealed chancre, or a former infection! for your hard chancre is a frail and fickle thing, here to-day, and gone to-morrow! Has any one observed an undoubted hard chancre not treated by mercury, and not followed by secondaries; still, there is the loophole that his hard chancre was but a soft one, with a base of inflammation. Has any one seen a child with congenital syphilis, poison its nurse's breast by means of aphthous excoriations, which are certainly not primary sores! Mr. Watson wisely stops short of such discussions, and goes off on another tack, disdaining to notice so puerile an objection to his, or rather Ricord and Bassereau's theory. Many men can theorise beautifully, but bring them to the test of treatment, and they fail. It is not so, however, with Mr. Watson—while his theories are but rechauffés of the French School, his practice is soundly based, and may well be listened to by those who still dream of specifics; not that we accept it as our *credo* in its entirety, for who ever yet agreed thoroughly with the practice of another; but generally, it bears the stamp of sound science and good common sense. He says, " we do not claim for mercury any specific influence by means of which it follows out the syphilitic virus and neutralizes it; nor do we maintain that, in order completely to extinguish the diathesis, it only requires that a certain indefinite quantity of mercury should be given. We merely claim for mercury an eliminative power, by means of which a rapid metamorphosis of tissue is effected, and the symptoms of syphilis are hurried through their regular evolution by the elimination of those modifications of tissue, which the introduction of the syphilitic virus has produced." This is the key to his treatment, one precept of which will suffice:—" Wherever the gentlest possible physiological effect of the mercurial has occurred, then the full therapeutic effect has been attained; and anything further must be injurious. Whenever the gums become tender, our eliminative ultimatum has been reached; and all we can hope to gain by the employment of the remedy will be attained, by keeping up this condition for such a period of time as it seems to act, by improving the general health of the patient."

We must now turn from Mr. Watson to Mr. Weedon Cooke, whose theoretical opinions are, in many respects, diametrically opposed to those we have just considered. He not only declares

boldly that " The individual and not the virus, govern the character of the chancre, and, at the same time, determines the acceptance of, or the resistance to constitutional symptoms;" but proves his point, from the words of Ricord and Henry Lee. The former surgeon says in his lectures, " I think it may be inferred that, for the manifestation of constitutional syphilis, *certain peculiarities lying within the individual*, which have as yet escaped detection, are indispensable; and that syphilis is, in this respect, on a par with other contagious diseases." The latter surgeon may be looked upon as one of the great exponents of the French theories in England; and the following opinion given forth by him in Mr. Holmes' *New System of Surgery*, is of great importance in its bearing upon the question of diagnosis between infecting and non-infecting sores. " We have at present no generally recognised and well-defined mark of distinction, independent of inoculation, between those diseases which are syphilitic and those which are not." As contrasting the views of two Ricordites on a vital point of their theory, let us quote again from Mr. Watson and Mr. H. Lee:— The former says, " Induration is always an early symptom of an infecting chancre; if a chancre is to be a source of infection, the induration will appear about the third and rarely later than the seventh day after the commencement of the sore; but having once appeared, unless developed in a very characteristic degree, it may be evanescent;" " often," as Ricord says, " disappearing before the work of reparation is finished, and before cicatrization is complete." The latter, as quoted by Cooke:—" Infecting chancres do not generally show their specific characters for some time; even a month has elapsed before the induration has appeared." Like the cats of Kilkenny, celebrated in song, we may hang these observations side by side, content to let them annihilate each other.

Mr. Cooke further holds, that the skin is the proper organ for the elimination of the syphilitic poison—he conceives, " that mercury retards the natural cure, and substitutes a not innocuous means of relieving the symptoms for an uncertain period;" hence, relying on his own experience, and claiming to have seen " *several thousand* cases of hard chancre and its consequences;" he inclines strongly to chlorate of potash, and dilute hydrochloric acid, in doses of fifteen grains of one, and twenty drops of the other, in water; or infusion of Columba or gentian; limiting his use of mercury to sluggish bilious temperaments, when he may add a few grains of blue or Plummer's pill, for a few nights only. Iodide of potash he com-

mends only for periosteal pains; for local treatment, lotions of copper, zinc, or lead, and black wash, with gentle friction of blue ointment, for a few nights, when the ulcer is healed, to disperse the hardness, either local or in the groin. The hot air bath, the mercurial vapour bath, (stopping short of the specific action of the mineral,) with good diet, and warm clothing, &c., are to complete the cure. In fact, Mr. Cooke is as strong an anti-mercurialist as is possible for a man to be in the present day; and we fear he goes even a little further in this direction than we can follow him—not as regards the majority of cases of syphilis, which, after all, need mercury no more and on no other principle than do other diseases. With Mr. Watson, we believe, most men of sense now scout the notion of mercury as a specific, in the sense of its being an antidote to the venereal virus, and prescribe it, whether largely or with discretion, as an eliminator of effete and poisoned structure; but there is no denying the fact, that in one form of the disease, the congenital, (of which, by the way, Mr. Cooke says nothing), mercury is the only means at our disposal of effectually rousing the eliminating organs; and, even in some forms and constitutions, where the drug has been injudiciously thrown in, a state of system may have been induced, in which no other stimulus will call these organs into action. In such cases, and they are very melancholy, no relief will be obtained from severe suffering, without a further use of the very drug which has to answer for much of the existing mischief. These cases, however, are now rare, and bad tertiary symptoms would be a disgrace to surgery, were it not, that in most instances it owes its existence to the cupidity and folly of the unlicensed quack and his miserable victim. Few men owning and deserving of the name of surgeon, will now venture to submit their patients to the dangers of a six-months' persistence in the use of mercury, or even to a six-weeks' *course* of the drug, in the old acceptation of that term. In these views of the disease and its cure, we are but reverting to what Cullen long since propounded in his work on the Materia Medica; here, with true philosophy he lays it down, that the disease is to be eliminated by increasing the natural secretions of the body; and he recommends mercury on this ground alone. We who possess many other less dangerous weapons, can afford to lay it comparatively aside; but, because the majority do not require its administration, we must not flatter ourselves that we can cure the disease in all cases without it.

Mr. Weedon Cooke, on gonorrhœa, may be dismissed in a few

words:—He renders the urine neutral by a free use of alkaline carbonates; gets rid in this manner of the ardor urinæ and chordee; and then cures the running with solution of chloride of zinc, varying in strength, from half a grain to three grains per ounce. He very properly denounces nitrate of silver injections; has no opinion of cubebs and copaiva, as internal remedies. We have not prescribed either for many years; and trust, almost entirely, to well regulated injections, generally of alum. No injection should be used which does not coagulate the albumen of the purulent secretion; for, there are cases on record, in which cystitis has followed a warm water injection, which had sent on into the bladder the infectious pus from the urethra. From three days to a week, are sufficient to put an end to an ordinary gonorrhœa, by well-timed injections. Occasionally, in first attacks, some nauseating doses of tartar emetic will be required for bringing down excitement, and some alkalies to counteract the ardor urinæ; but in most cases we can cure the disease by local means alone.

In taking leave of these somewhat remarkable pamphlets, we beg to recommend them for perusal to all who are brought into contact with syphilitic practice; they will well repay a careful perusal, and contain more valuable matter than many an imposing quarto.

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*Mémorial de Therapeutique. A l'usage des Médecins Praticiens.* Par le DOCTEUR F. FOY. Paris: Germer Baillière. 1862.

*Memorial of Therapeutics for the use of Practical Physicians.* By DR. F. FOY. Paris: Germer Baillière. 8vo, pp. 1225.

FOR some years past we have been labouring under the impression that the inhabitants of Great Britain are the principal worshippers at the shrine of Quackery—that the altars of the god receive its richest contributions from our fellow-countrymen, and that England is the Empirics Arcadia. Nor need the opinion that we entertain be wondered at, when one reflects on the number of advertisements that appears day by day in our public journals, emanating from so many different quarters, each and all of them vaunting the particular *Doctor* So and So and his stuff, the one as the incarnation of all human medical knowledge, the other (to use the mildest appreciative expression) as the Elixir Vitæ. Have you corns? try such and such pills; they will not only cure your corns, but give a fascinating

expression to your face, make your hair curl, and impart to you an inexpressible air of supremacy and command. Have you constipated bowels? why try such and such a mixture (N.B. the bottle at 33s. far more effective than that sold at 2s. 9½d.), it cures not only this complaint, but sterility, piles, coughs, fits, and, beyond all, that which has puzzled all our best authorities to do—consumption. To find one medium capable of curing every variety of venereal disease, has, in modern days, been solved by the fortunate and learned discoverers of the " Reach-so-far," and some two dozen other equally fortunate investigators; and, independent of these philanthropists, should their remedies unaccountably fail, have we not mesmerists, table-rappers, electro-biologists, bio-phrenologists, homœopathists, hydropathists, and every other variety of *trickem-opathists*, to fall back upon, to relieve medical science at the present day of the opprobrium of not being able to cure every disease brought on us by human folly, inheritance, or misfortune. Men, no matter with what little amount of brains they may be endowed, would hesitate ere they entrusted their fortunes to the tender mercies of a legal charlatan, but their lives are fearlessly, nay recklessly, committed to the care of any mountebank who has but the effrontery sufficiently to advertise himself and his wares. No wonder, therefore, that we should exclaim " Vive la bagatelle, England for the English, but the English themselves for the quacks."

Now, if Great Britain be the Eldorado of Empirics, France is the land par excellence of simples. In no other country on the face of the habitable globe is such reliance placed on remedies of no very apparent if not of questionable energy. And in the work, the title of which heads this article, we find a grand exposition of each and all of these. Nor is our author content with giving us formularies for these; his ambition is of a more vaulting character; it is presented to us as an encyclopædia of medical knowledge. In alphabetical order we have presented to us the names of every disease to which flesh is heir, and of all the resources of a most copious Materia Medica.

To give our readers some idea of the manner in which our author has acquitted himself of his self-imposed task—herculean almost in its contemplation—we shall open the book at haphazard, and submit some extracts for their consideration:—

" DISLOCATIONS OF THE FIBULA UPON THE TIBIA—Very rare dislocations."

We trust that our readers will not think us imposing on their credulity when we give them this extract as a *faithful translation* of M. le Docteur Foy's clear, full, and explicit descriptions and instructions on this form of surgical accident.

Again—

" POTT'S DISEASE, OR VERTEBRAL DISEASE—Local and general symptoms—Destruction and suppuration of the bodies of the vertebræ, with gibbosity, inflection, and curvation of the spinal column, inconvenience in the movements and position — disturbance in the circulation and respiration, abscess by congestion, &c., according to the seat of the disease—abscess when the disease occupies the dorsal and lumbar portions, rare in the cervical region."

His remarks on aneurism are so happy and exhaustive, that we should not consider ourselves as having discharged our duty to such of our professional brethren in this city as have enriched this department of surgical science with their labours, did we not record them here for their special edification :—

" ANEURISM OF THE BRACHIAL ARTERY—Symptoms—compression of the radial and median nerve, whence the semiflexion of the arm, the pains in the fore-arm and hand, &c."

Hear this ye shades of Porter and Bellingham! read this Tufnell, and blush at all the time and paper you have wasted, when the task could have been completed in two lines and a half—and such a two lines and a half!

Again—

" ANEURISM OF THE FEMORAL ARTERY—Symptoms—tumour suddenly developed, of a round shape in the upper part of the thigh, of a flattened one in the lower part of the limb, &c."

&c.! We have all heard much of Lord Burleigh's shake of the head, and of what a world of meaning was therein; but did any of us ever know of so comprehensive an &c. as this of M. le Docteur Foy? In it we must look for all that we should know of the diseases which he pretends to describe — in using this word " pretends," we do so advisedly. A more outrageous insult could not be offered the members of any profession, than to put forth such a work, under the pretence of its being an exposition of the present

position of medical and surgical knowledge in any civilized country, and, as it were, to add insult to injury, in his preface he states this precious work to be an epitome of the labours of the most distinguished of our continental brethren. In his preface he writes thus:—

"In this work, the fruit of twenty years of study, and of ten years of practice, we have described all that we have learned from Pinel, Landré—Beauvais, Corvisart, Petit, Chaussier, Bosquillon, Montaigue, Biett, Alibert, Laennec, Magendie, Husson, Cullerier, Lherminier, Honoré, Portal, Cayol, Itard, Esquirol, Leroux, Fouquier, Double, Recamier, Baron, Désormeaux, Guersant, Pelletan, Boyer, Dupuytren, Sanson, Dubois, Marjolin, &c., all able and celebrated professors.

"Since this period, 1843, we have placed under contribution the lectures, memoirs, monographs, and observations of the pupils and successors of the great masters whom we have just enumerated. To say that we have largely borrowed from all those who now-a-days occupy the foremost rank in the art of curing, is but to proclaim the intention that we have had of placing our work on a level with the science."

To state that he has faithfully given us *all that he has learned* from these great ones of the past, may be perfectly true; but to put this farce of a book forward as a sample of the present position of French medical science, is an insult to the talent and acquirements of a nation, to the scientific members of which we lie under too many and deep obligations, for us to pass it by in silence. Had he contented himself with giving us the formularies of the celebrated men, whose names he invokes to shield his compilation, we might have expressed a different opinion of his work; true, it would not be original, still we should have been grateful for his labours, and expressed ourselves accordingly. In it we find many formularies suggested and employed by these celebrated men, to whom in his preface he alludes, and it was the finding amongst those such a quantity of *Siropes, tisanes,* &c., that suggested our remarks on the taste displayed by our continental brethren for such simple remedies. Had M. le Docteur Foy confined himself to the collection and recording of such, we again repeat it, his work might have been tolerated; but even then it would have been inferior to many similar works long since placed at the service of the medical profession; but gravely to put it forward as a synopsis of medical and surgical science, is an assumption at which we are at a loss to know whether to laugh or be indignant.

*Papers on Chemistry.* By MAXWELL SIMPSON, M.B., T.C.D. Formerly Lecturer on Chemistry in the Park-street, and the Original Schools of Medicine, Dublin.

*Ueber zwei neue Methoden zur Bestimmung des Stickstoffs in organischen und unorganischen Verbindungen.* Annalen der Chemie und Pharmacie Bd. xcv., p. 63.

*Note concernant l'action du Brome sur l'Iodure d'aldéhydène.* Comptes Rendus, Tome xlvii. Séance du 1 Mars, 1858.

*Sur une base nouvelle obtenue par l'action de l'ammoniaque sur le tribromure d'allyle.* Annales de Chimie et de Physique, 3rd Série, t. lvi., and Philosophical Magazine, Oct., 1858.

*Action du Chlorure d'acétyle sur l'aldéhyde.* Comptes Rendes, Tome xlvii. Séance du 29 Novembre, 1858.

*On the action of acids on Glycol.* Proceedings of the Royal Society, Nos. 34 and 36, 1859.

*On the Synthesis of Succinic and Pyro-tartaric Acids.* Philosophical Transactions, 1861. p. 61.

THE Medical School of Trinity College has been deservedly in possession of a high reputation for many years, and the study of experimental physics attracts more students at the University of Dublin, than at either of the sister Universities. Of both medicine and physics, Chemistry forms a most important part. We do not, however, see that, as regards that science, until the appearance of Dr. Simpson's papers, much has been done by any one, with the exception of Professor J. W. Mallet, of late years to remove the name of " silent sister," so often applied to our *alma mater.* There are no opportunities offered to the students of chemistry to advance their studies after they have taken out their degree, and until facilities for this purpose be provided, those who determine, in spite of difficulties to pursue the study, are obliged to repair to the Universities of France or Germany.

Of those who have followed this course, few have devoted themselves to the study of chemistry alone, and of these Dr. Simpson has distinguished himself by the variety and importance of his researches, as a glance at the foregoing list will show. We hail

these publications with the greater pleasure as they appear to increase in importance with every year. In fact, the latest of the papers, that on the synthesis of succinic and pyro-tartaric acids, is that which has in itself the greatest intrinsic value, and it affords us earnest of similar investigations being carried further and with still greater results hereafter.

We first find Dr. Simpson at work in the laboratory of the University of Heidelberg, under the auspices of Professor Bunsen, whose instruction has been sought by so many of our English chemists. He is engaged in the examination of certain azotised bodies which are very difficult of combustion. He finds the ordinary oxidising agent in organic analysis, oxide of copper, insufficient to complete the process of liberation of nitrogen; and, as the use of chromate of lead is impracticable, from the nature of the analysis to be performed, he is driven to seek for a substitute. The method of combustion with soda lime is unfitted for the purpose, in consequence of some peculiarities in the constitution of the substances under examination. He therefore tries the red oxide of mercury, instead of oxide of copper, and finds that it gives results which leave nothing to be desired. He gives two methods, of which one is *comparative*, the other *absolute*. The latter he finds applicable to the analysis of all the compounds of nitrogen, without exception.

We cannot attempt to give a description of the processes, but must refer our readers to the original paper, as, without the plates, it would be impossible to give an intelligible account of them. They have been thoroughly tested by Messrs. Gibbs and Genth (*Annalen der Chemie*, vol. civ., pp. 150 and 295), who have performed upwards of 30 analyses by them, which are remarkable for their accuracy. They are also incorporated in the last edition of *Fresenius's Text Book of Quantitative Analysis*, in which none but trustworthy methods are inserted. Nevertheless, we are of opinion, that, with the exception of the cases where the experimenter was precluded, as Dr. Simpson was, by the circumstances of the case, from employing the methods either of Liebig, or of Will and Varrentrapp, the processes he recommends will hardly meet with general use, as they require a good deal of manual dexterity in the fitting of apparatus. This, however, does not detract, in the least degree, from the originality and fertility of resource which are exhibited throughout the paper. Several of Dr. Simpson's subsequent investigations have been carried on in the laboratory of M. A.

Wurtz, in Paris, and have a reference, more or less direct, to the theory and properties of the poly-acid alcohols, for which that chemist is so justly famous. The first was carried on with the view of forming a glycerin, corresponding to ordinary alcohol, from the iodide of ethylene. This substance, whose constitution is $C_4H_4I_2$, yields a compound $C_4H_3I$, which is the iodide of acetylene. From the homologue of this body, belonging to the propyl series, M. Wurtz has obtained the terbromide of allyl $C_6H_5Br_3$, and from it has ultimately obtained ordinary glycerin, $C_6H_8O_6$. Dr. Simpson succeeded in forming a body which had the same composition ($C_4H_3Br_3$) as that sought for, with which, however, it is only isomeric, as its true rational formula is $C_4\left(\begin{matrix}H_3 \\ Br\end{matrix}\right)Br_2$. It is the brominated bromide of ethylene, and does not, therefore, correspond to the terbromide of allyl obtained by Wurtz.

Dr. Simpson next proceeded to carry on experiments on the terbromide of allyl, above-mentioned, and, by the action of ammonia on it, succeeded in forming a new organic base, which is di-brom-allyl-ammonia. Its formula is $N\begin{Bmatrix}C_6H_4Br \\ C_6H_4Br. \\ H\end{Bmatrix}$ It is, accordingly, an imid base, in which the two equivalents of hydrogen are replaced by an equal number of equivalents of the mono-basic radical $C_6H_4Br$, (brom-allyl). The formation of the base was accompanied by the separation of bromide of ammonium in large quantities. In Dr. Simpson's first communication on this subject (*Comptes Rendus*, xlvi, p. 785), he was inclined to write its formula $N\begin{Bmatrix}C_6H_5Br \\ C_6H_5Br.\end{Bmatrix}$ According to this view it would be an *ammonium* in which the four equivalents of hydrogen are replaced by two equivalents of the bi-basic radical $C_6H_5Br$. A radical of this type $C_nH_n$ is found to be bi-basic, while those of the type $C_nH_{n+1}$ are mono-basic. He was, however, disposed to alter his views on the subject, by the discovery that the body under examination contained, at all events, one equivalent of replaceable hydrogen. On treating the base with iodide of ethyl, Dr. Simpson formed the hydriodate of ethyl-di-brom-allyl-ammonia. This base has the composition $N\begin{Bmatrix}C_6H_4Br \\ C_6H_4Br, \\ C_4H_5\end{Bmatrix}$ and it has strong alkaline properties, being able to precipitate the

oxide of copper from its salts. Dr. Simpson was unfortunately unable, owing to the paucity of material, to complete his researches in this direction by the formation of a base corresponding to ammonium.

The next paper which we have to notice is very brief, it merely gives the result of an experiment made with a view of forming crotonic acid by synthesis. This acid is the second member of what is called the "oleic acid group," the typical formula of which is $C_nH_n-_2O_4$. The best known members of the group are oleic acid $C_{36}H_{34}O_4$ and acrylic acid $C_6H_4O_4$. The former is the essential acid constituent of almost all so-called oils. All acids belonging to this group are decomposed, on being heated with potash, and yield acetic acid among other products. Acrylic acid yields acetic and

formic acids, as $C_6H_4O_4 + 2HO = {C_4H_3O_2 \atop H} \Big\} O_2 + {C_2HO_2 \atop H} \Big\} O_2.$

Reasoning from these data, Dr. Simpson tried to form the next highest acid to acrylic, viz., crotonic $C_8H_6O_4$, by the action of chloride of acetyl on aldehyde. He tells us that he was led to make the experiment by the fact, that Bertagnini has formed cinnamic acid $C_{18}H_8O_4$ by the action of the oil of bitter almonds on the same chloride. In Dr. Simpson's case the experiment did not yield the desired results, as the bodies employed combined together without the elimination of hydrochloric acid, as he had been led to expect would be the case. The compound produced had the composition $C_8H_7ClO_4$, and Dr. Simpson was enabled to assign to it its true place and name in the course of his researches on glycol, which we now proceed to notice.

These investigations possess an interest far superior to that of any of those above noticed. The whole theory of poly-acid alcohols is of very recent date, and is, to a great extent, due to the labours of M. Wurtz. In the laboratory of this chemist, Dr. Simpson performed a series of experiments on glycol, the bi-acid alcohol, intermediate between the ordinary alcohols, which are mono-acid, and the glycerines, which are tri-acid. The most interesting compound which he obtained was one which is isomeric with that produced in the experiment last cited, and whose empiric composition is accordingly $C_8H_7ClO_4$. It is the "chlor-acetine of glycol," and is intermediate between Dutch liquid and the di-acetate of glycol. This is seen by a glance at the following formulæ :—

$C_4H_4Cl_2$

Dutch Liquid

$$\left.\begin{array}{c} C_4H_4 \\ C_4H_3O_2 \\ Cl \end{array}\right\} O_2$$

Chlor-acetine of Glycol
(Simpson)

$$\left.\begin{array}{c} C_4H_4 \\ C_4H_3O_2 \\ C_4H_3O_2 \end{array}\right\} O_4$$

Diacetate of Glycol
(Wurtz)
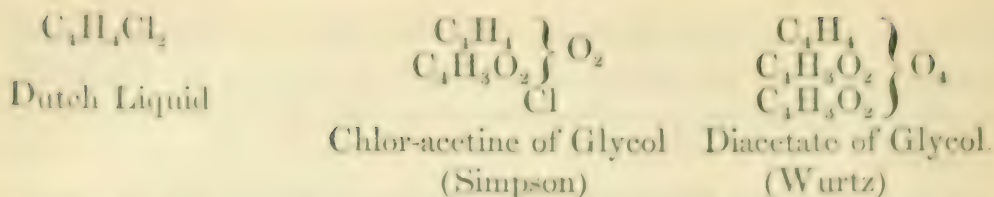
The body isomeric with the chlor-acetine of glycol, which has been above referred to, is called by its discoverer "chlor-acetine of ethylidène," and belongs to the series derived from the hypothetic hydro-carbon ethylidène, isomeric with ethylene (olefiant gas). The former of these series contains aldehyde, while the body isomeric with it in the ethylene series is the oxide of ethylene, or ether of glycol, obtained by Wurtz. Dr. Simpson has followed up his discovery by the successive formation of a homologous compound, containing the radical butyroyl, and also of one containing benzoyl. He points out a process by which the two equivalents of replaceable hydrogen in glycol may be replaced by acid radicals, and has actually obtained

the butyro-acetate of glycol. $\left.\begin{array}{c} C_4H_4 \\ C_4H_3O_2 \\ C_8H_7O_2 \end{array}\right\} O_4.$
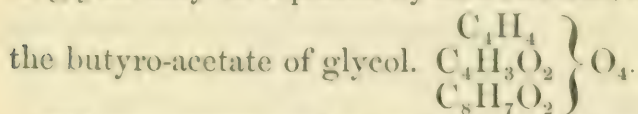
We now come to the last and most important of Dr. Simpson's investigations. There are two homologous series of monobasic acids, whose typical formulæ are respectively $C_nH_nO_4$ and $C_nH_{n-8}O_4$. Parallel with these, we find two series of bi-basic acids, represented by the typical formulæ $C_nH_{n-2}O_8$ and $C_nH_{n-10}O_8$. The first-named acids are directly connected with two series of the mono-acid alcohols, and it has long been suspected, that a similar relation existed between the bi-basic acids and the bi-acid alcohols or glycols. The credit of establishing the correctness of this surmise, belongs to Dr. Simpson. It has long been known, that the cyanide of an alcohol radical will yield, on being heated with caustic potash, the acid of the next higher alcohol, with the elimination of ammonia. By the use of this process, Becker has succeeded in forming the missing acid margaric $C_{34}H_{34}O_4$ from the cyanide of cetyl, and, theoretically speaking, we ought to be able to obtain, successively, all the acids and alcohols of the $C_nH_{n+1}$ group from formic acid, were it not that the process of producing an alcohol from its own fatty acid is a very troublesome one.

Dr. Simpson first formed the bi-basic cyanide of ethylene $C_4H_4Cy_2$, a body which had never before been prepared, and treated this with caustic potash. The reaction which took place is represented by the following equation.—

$$C_4H_4(C_2N)_2 \quad +2(KO.HO)+4HO= \quad \left.\begin{matrix} C_8H_4O_4 \\ K_2 \end{matrix}\right\} O_4 + 2NH_3$$
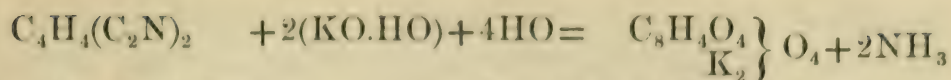
Cyanide of ethylene                     Succinate of Potash.

Dr. Simpson carried his researches further, and succeeded in forming the next higher bi-basic acid, pyro-tartaric $C_{10}H_8O_8$, by treating the cyanide of propylene $C_6H_6Cy_2$ by the same process as he had used with its homologue, the cyanide of ethylene.

This fact directly proves that the succinic acid group is directly connected with the bi-acid alcohols (glycols), and both are traceable to a series of bi-atomic hydrocarbons $C_nH_n$. The relations are strictly parallel to those of the ordinary alcohols and fatty acids, as may be seen from the following table:—

| Mono-acid | Mono-basic | Bi-acid | Bi-basic |
|:---:|:---:|:---:|:---:|
| $\left.\begin{matrix} C_4H_5 \\ H \end{matrix}\right\} O_2$ <br> Ethyl alcohol. | $\left.\begin{matrix} C_6H_5O_2 \\ H \end{matrix}\right\} O_2$ <br> Propionic acid. | $\left.\begin{matrix} C_4H_4 \\ H_2 \end{matrix}\right\} O_4$ <br> Ethyl-glycol. | $\left.\begin{matrix} C_8H_4O_4 \\ H_2 \end{matrix}\right\} O_4$ <br> Succinic acid. |
| $\left.\begin{matrix} C_6H_7 \\ H \end{matrix}\right\} O_2$ <br> Propyl alcohol. | $\left.\begin{matrix} C_8H_7O_2 \\ H \end{matrix}\right\} O_2$ <br> Butyric acid. | $\left.\begin{matrix} C_6H_6 \\ H_2 \end{matrix}\right\} O_4$ <br> Propyl-glycol | $\left.\begin{matrix} C_{10}H_6O_4 \\ H_2 \end{matrix}\right\} O_4$ <br> Pyro-tartaric acid. |

We do not hesitate to characterise this, as one of the most important discoveries which have been made this year. The nature of the papers which we have been examining, is such, that they do not well admit of criticism. They are simple statements of observed facts, and their bearing on other investigations is therefore easily shown. We have therefore deemed that the task of reviewing them would be best performed by giving a brief abstract of the contributions to chemical knowledge afforded by the author of the papers.

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*Lectures on the Germs and Vestiges of Disease, and on the Prevention of the Invasion and Fatality of Disease by Periodical Examinations.* By HORACE DOBELL, M.D., &c., &c. London: Churchill. 1861. 8vo, pp. 198.

IT is not very easy to avoid doing Dr. Horace Dobell a very great injustice, and that, by taking his words from his own mouth at any

one part of his lectures. Dr. Dobell is a man who evidently can think, and not unfrequently to very good purpose; but, as is not unseldom with men of good abilities but somewhat defective training, he is at times as enthusiastic for a worthless plagiarism as for an entirely original idea. He has got to that stage of mental cultivation, whereat what is merely pseudo-scientific, is considered legitimately available for purposes of dilution; and possessing an excessive fondness for the first fruits of his brain, he imagines that his darlings will be more tenderly dealt by, and more affectionately received, through a bestowal upon them of grandiloquent appellatives, leading at least to the inference that their connexions are undeniably good.

Of a verity we believe, that were we not one of the most astute reviewers at present wielding the critical pen, we should have set down this book at once as one of those deceptive pieces of flimsy, passing muster only among a certain set of people, and credited by the lights of scientific institutions, by raw disciples of Comte and Michelet, and by the ladies who read at the museum in blue stockings and spectacles, with a capability of setting fire to the Liffey. There is that ingenious dovetailing of semi-scientific scraps, and so cunning a torturing of intricate phrases, that, as we have said, we began to think the whole thing was a sham. For we have an abhorrence of the growing vice of dealing with life from the equational point of view, which looks so very well on paper; of analyzing by simple mathematical rule whatever is subtle, inexact, and poetical in science. The phraseology of the X + Y school is, to us, cacophonous. We have a distaste for all such terms as coetaneous, correlative, antecedental, concurrent, quantitative, and the like, which glitter throughout the text like false diamonds on the shore, while the broad blue bosom of the ocean of truth spreads out so invitingly. Not but we are glad to find Dame Physic in good company, and getting on in the world; but she must be sparing of too free a use of the language of her betters, and be rather chary of the abstract and the concrete, the esthetical, the co-ordinate, and so on. "Madam," said O'Connell, to a female compatriot of our own, "you are a parallelopiped," and that was enough for her. Dr. Dobell talks of vitalized germs, antagonistic developments, and vital ultimatums, and is, we confess it, at times more than enough for us.

But to return to the shingle—

"According to the most recent statistics employed by actuaries, it may

be calculated, that out of every 100,000 children born, only 63,296 reach the age of twenty-five years; 36,704 dying from various causes before that age. If each of these 63,296 individuals has, at the age of twenty-five, produced one child and $\frac{7}{12}$ths, the number thus obtained will be only a fraction more than is sufficient to compensate for loss, and to bring the population up to the original quantity. In order, then, to keep up the population, the V.M.F., with which each individual was endowed at birth, must have accumulated at least $\frac{7}{12}$ths during life, instead of wasting, expending, or being consumed; otherwise, the individuals of each successive generation, would be endowed with a smaller quantity of force than their predecessors. And as, so far from the population being only maintained at a fixed quantity, it increases at a great rate, the accumulation of V.M.F., must be proportionately great. To fulfil this necessity of organic existence, we discern—or at least such is my hypothesis—that every living thing is given, 1st, a certain *endowment of V.M.F.*, with which to begin its career; 2ndly, *accumulators* of fresh force; the amount which it can thus accumulate being regulated only, *cæteris paribus*, by the requirements of the ultimatum."

The author in this paragraph intends to convey that the vital principle is derived and accumulated from the inorganic world; and that the amount of this principle or force transferred to the living being by its own organic actions, is proportionate to the necessity that claims its exercise in the external world, and which originates in the loss it is intended to compensate. That some species of transference does take place, is in harmony with the periodic demand every organised being sets up for nutrition; and it is scarcely a violation of analogy to suppose, that in the progress of the consumed material, from the condition of proximate principles to constituent elements, a condition or force transfers, (which may be estimated by the increase in vital and vitalizing phenomena, and the evident direct dependence of these upon the amount of food) serving to perpetuate function and endow matter with the *vis viva*. But how can such force ever come within the grasp of exact knowledge? and how can such a force be in any way dependent upon extrinsic calls for its exercise? Nothing, we allow, would so tend to demonstrate a prescience and forethought in nature as such a condition. Nor, indeed, could the intangible and wondrous attributes of the life-force more impress the reflective mind, did we even credit them with an association of so self-directing a character. But passing from the general to the special, we see no such mutual connexion and dependence. We observe that the most densely

populated districts are precisely those whose conditions, hygienic
and moral, might be pre-supposed most antagonistic to life-force.
And we see that the amount of such force called into existence is
greatest where no apparent necessity claims its exercise, and where,
on the contrary, the strongest possible numerical and social reasons
present themselves for its limitation. It is evidence, nevertheless,
of a reverential spirit, which does our author credit, to believe that
the amount of force which a given individual can accumulate,
depends on its requirements for the attainment of its ultimatum,
and the proof of such a law would sweep away many apparent
obstacles to the harmony of science and theology.

But the adaptation of the powers for securing the attainment of
the ultimate object held in view at the first moment of being, can
scarcely be believed to be modified by conditions and requirements,
which, of whatever importance to the philanthropist and the states-
man, weigh but little with the master-worker. That the capacity
for repairs under injury exists; that, as in the insect tribes, there
is to be witnessed a power of reproduction, bearing it would
strikingly seem some definite proportion to the waste of life occur-
ring in the offspring, is true; but it is scarcely legitimate to conclude
—" That under every condition proper to the different epochs of
an animal's life, the formative or productive force is sufficient *in
every respect to the necessities of the case.*"

By the term *ultimatum*, our author would convey the consumma-
tion of the design in view at the formation of the animal. From
this aspect the ultimatum may be supposed to be attained by the
insect, when it has secured the multiplication of the species in the
form of the necessary number of ova. The ultimatum there being
reproduction, the force in question may properly be styled repro-
ductive; and doubtless in each individual a definite relation can be
traced between such force-manifesting power, and the requirements
of the species. Even here, however, a discrepancy is apparent. It
is, evidently, as much a fixed law that bees should kill each other
*en masse*, when the queen bee is impregnated, as that they should
lay large numbers of eggs. Is the force then at the creation of the
bee nicely calculated to meet the requirements of a purposeless
waste of it, which is as evidently pre-determined? The inexactness
of Dr. Dobell's conclusion becomes more manifest still, in the case
of man. His ultimatum, evidently, is not attained with the multi-
plication of his species, but only when those duties and functions
have been fulfilled which an intellect entails and enables him to

discharge. If the force be proportionate to the ultimatum, it is evident, here, that its nature must be so complex as to remove it from the scope of pure reason; and that, as both the duties and functions of man vary in their nature and performance with collateral influences of chance and education, they cannot be derivable from the force imparted antecedental to them, unless that force be capable of leading its possessor to the attainment of an ultimatum altogether different under different successions of collateral accidents.

To this force, " in one and all of its vitalized modes of manifestation," Dr. Dobell applies the symbol V.M.F., vitalised mode of force. If the reader can understand this, he will enter with Dr. Dobell into the spirit of the " L.M.F.," or " lifeless mode of force." By *modes* Dr. Dobell understands what Locke seemed to understand, viz., " such complex ideas as, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependencies on, or affections of substances." That is all very well. Of course every one of our readers has sufficient V.M.F. to enable him to attain this ultimatum. Dr. Dobell is scarcely to be blamed, for ourselves desponding with respect to the ultimatum, in an excess of the L.M.F. In the quotation we started with, we found every one of 63,296 individuals possessed an excess of V.M.F., to the value of $\frac{7}{12}$. Bearing this in his mind, the reader may proceed to grapple hopefully with the " succession of transferences." The " force " is present, but it must (we follow the author,) be directed in a certain way and accumulated in a definite manner. The evolution of the radical and first leaves from the seed, is evidence of an accumulation of force and material from the inorganic world; and, as in the vegetable, so in the animal, all are " provided with the power of accumulating by osmotic action." On this provision of accumulators depends the transference of force from the food to the being, and the conversion of simple unorganised to complex organic principles.

" It may be stated then, as a conclusion from these premises, that the V.M.F., in the highest animals, is continually accumulated by a *succession of transferences* from the organic world by which they are surrounded. It is then no more than a postulate"—query axiom—" to affirm, as I venture to do, that in this manner the constitution of the animal, both in material and force, will be dependent on the conditions of the world in which it exists, subject to alterations correlative with those of that external world itself."

Some of this accumulated force passes by the next step in the

hypothesis into the "germs of the vitalized being." The V.M.F. "passes in," and "the body having provided for its decendants the force necessary to the commencement of their vital career, makes the world at large its residual legatee." The legatee comes into this little property with mingled feelings; for part of it only admits of investment, the residue being accumulated for the benefit of succeeding generations.

By means of this hypothesis Dr. Dobell is enabled to reconcile the apparently antagonistic operations of generation and development. In Dr. Carpenter's view these phenomena are, of necessity, opposed; for a diminution of the germinal capacity attends every act of development, while the act of generation renews it. Dr. Dobell, on the contrary, believes that no loss of vital energy has been sustained through the budding; but that this extension has been co-equal with the accumulation of V.M.F., which has "been determined in another direction consistent with the conditions of existence, in obedience to the law for attaining the ultimatum." Dr. Dobell does not hesitate to believe that his hypothesis lends dignity to the law of the conditions of existence of Cuvier, and a new importance to Mr. Darwin's theory of natural selection.

At first sight the connexion between the germs and vestiges of disease, and V.M F., might be thought to be somewhat obscure. The practical conclusions, therefore, of Dr. Dobell are not without their value.

" 1. That the vestiges of disease, coetaneous diseases, and the conditions of life, may determine the efficiency or non-efficiency of the V.M.F., to prevent or arrest the invasion and progress of premature destructive changes in the organism, to secure its repair when damaged, to produce an offspring, to endow that offspring with V.M.F. of normal quantity and quality.

" 2. That abnormal conditions of the V.M.F., either congenital or acquired, may be changed by changes in the conditions of life, and by means which exert an influence on the vestiges of disease; and that the influence of such changes may affect not only the individual but a succeeding generation."

We have hinted that, in our opinion, Dr. Dobell can think, but cannot lucidly express his ideas. His science partakes of the hazy, the metaphysical, the unpleasing. In like manner Dr. Dobell can write; but when he takes to word-painting, his pencil disdains all attempts at control. The third lecture of our author takes us into the

realms of sweetest fancy and gushing innocence, but the fancy is over-done, and the innocence smacks of the rouge-pot.   It opens like the scene in Don Giovanni.  Zerlina is tripping about in the shortest of petticoats, and Masetto chirps in the most dulcet of strains.   Here and there the monster of the drama shows his white legs, but he does not forget his guitar.  The V.M.F. enters once or twice and disturbs the peace of mind of the audience; but he is in this act so insinuat-ing and so gentlemanly, that we almost forget what a villain he is, and how he is bent on robbing the girl of her virtue.  The synopsis of this lecture looks not unlike the exciting and condensed account of the costly extravaganza of Pretty Prince Pastoral, or Oranges and Lemons and the Twelve Dancing Princesses.   The good genius of the play asks us to forget the "grim walls," and the chains, and the beaten paths of our orthodox prison, and gallop "across country" in search of medical truth, with an utter disregard, be it noted, of the selfish interests of all "proprietors of hedges, fences, and ditches."   Whereby hangs a parable.

"You are so perfectly familiar with that road which leads from the village to the wood, up which you have so often sauntered ; you know quite well the path to the mill—your favourite evening walk.  But I shall just trot you up the lane at the end, and show you over that thick hedge on the bank, when you will see that your road to the wood and your path to the mill run so nearly parallel and so close together, that the road will take you to the mill, and the path to the wood, by a very slight turn indeed.  I shall take you a gallop to the lake in the valley, which you always believed had its source in that swampy wood on its higher bank ; and we shall then climb the hill to your favourite well under the beech trees, and to the little stream that runs from it, and loses itself under the rocky side of the mountain ridge.  You know these spots well from childhood ; but I shall take you through the brambles and furze on the ridge, and down through the quarries on the other side, and show you your little stream gushing from the rocks again, and tumbling down the hill-side to the swampy wood.  I shall not be stopped by notice-boards, warning off trespassers, or by your legends of the dangers of the place.  We shall be careful of our footing, however, and perhaps dismount and lead our horses slowly through the worst of the stones ; but down we must go in spite of them, and prove to you that it is your favourite well under the beeches after all, which makes the wood a swamp, and fills your fine lake in the valley.

"I am convinced that you are wrong, notwithstanding the testimony of your oldest inhabitants, when you tell me that the church on the hill, to which you have walked every Sunday these twenty years, marks the

highest point in the county. It certainly looks from your village and
from your usual rides as though it might; but come with me across the
country, and, screened by those tall trees which appear to skirt the
horizon, I will show you a hill almost up to their tops, from which your
church is seen enveloped in the valley mists.

" Now change the scene, and return to life in town. Let us take our
course across the ups and downs, the quick-sands and the thorns, which
beset the study of disease and health. It is still a cross-country route I
wish to take you; but don't misunderstand me—don't suppose that I wish
you to leave your ' hand-books' behind, or to forget one item of what
you have learnt about the usual ways and by-ways, the well-known
objects of interest, and the public places. No guide is justified in pene-
trating to the interior, till he has learnt all the roads well worn by his
predecessors, so that he may recover the safe track if he finds himself
getting into danger."

The several characters in this *chasse au canard* are, Patient
number one, who

" Enters while we speak. Be still, and observe his agitated address,
the flush about the forehead and upper part of his face, the unsteady
eyes wandering about, as though in search of words sufficiently expres-
sive to impress us with the importance of his case.

" Mark especially the peculiar falter in his speech, by which a syllable
or word is now and again dropped, as though the force from behind
suddenly failed, and the sound went back into the larynx instead of
being uttered."

Then a

" Corpulent flabby old lady, who has a symmetrical patch of psoriasis
on each leg; and is, as she calls it, ' teazed to death with erysipelas of
the ears and sides of the head.' We soon find that instead of erysipelas,
it is eczema; and in one of her eyes we see an advanced and very yellow
cataract."

Next

" A little child, with large grey languid eyes, and a very white skin."

Who subsequently turns out to be the wrong patient, since it is not
she but her mother who wants advice.

Then the lady herself. She was 30 when she married, and

" Her marriage had been postponed, to suit the wishes of her parents,
that she should wait till her intended husband had attained a certain
position in society, and could bring her a liberal income."

Next

"Is a gentleman of 60, the proprietor of quarries in Wales, and a director of several companies in London, a very active, energetic man. But those occupations require that he should frequently travel long journeys by rail, and be able to sit out protracted board meetings." &c.

Ladies with quivering lips; short breathed men; children with the measles; and a retired baker.

Need we observe, that all this leads at last to the transformation scene, where Prince Pastoral marries the Princess Discretion, in a blaze of blue fire, pointing with his wand to the " wells and springs of disease," amidst thunders of applause.

At length, however, Dr. Dobell pulls up his hobby, and dropping his metaphors and his word-paintings, proceeds to work in a manner more creditable to the thinker and the physician.   For, unless the book aims at the public, we hold that the text we have just skimmed over is such as it would be flattery to call valueless. The author's purpose is to insist on the necessity in all cases at definite periods, of searching for the germs and vestiges of disease. This necessity, he is desirous to show, springs from the intimate dependency and mutual connexion of diseases one with the other: that diseases of serious character frequently are to be traced to first germs, apparently but trivial in themselves; and that disease is acquired and entailed by a non-eradication of the slight vestiges which, in most cases, after a disease, linger in the system.   It is to the pre-existence of germs and of vestiges, " to this class of changes, to these vestiges, and vestiges of vestiges, together with the conditions of life, that we have to look for the real causes of mortality in disease."

We think none the worse of all this, that we knew it all before. Of course, if a child have the dropsy, a shrewd guess may be given at the vestiges of scarlet fever.   If a young lady is coughing and thin, a natural inquiry may be hazarded after parental phthisical germs.   If a third have a venous pulse, it would be nothing very wonderful for a physician to seek for the cause in a remote rheumatic fever.   But this is not sufficient to recommend the profession to attend to; the prodromata are scarcely worth writing a book about, but to caution us against overlooking " the state of the correlative parts;" and " the quantitative and qualitative state of the V.M.F." is altogether a different business.   It is not enough that a practitioner should use his common sense, remembering, what we

should think, no one with common sense could, by any possibility, forget—that disease produces disease—but, he must in every case, keep his eye upon the V.M.F., and the "essential antecedent or E.A;" for the V.M.F. "may be brought to various degrees of defectiveness," and the E.A. may, "in a certain number of cases, be in excess of any possible condition of the V.M.F., either to protect against the invasion of disease, or to prevent death." Nor will the etiology of the disease be understood unless he bear in mind " the essential antecedent—the causes of the essential antecedent—the pre-disposing antecedents—the causes of these pre-disposing antecedents—the causes of fatality—the causes of these causes—and the vestiges."!

Passing on to lecture four, we discover the bearing of the principles laid down in the preceding lectures. We have etiological analyses of typical diseases, which we hope may prove valuable in emergencies and at the bed-side. We doubt much, however, whether the obscurity attending the differential diagnosis of continued fevers, is in any way lessened by the light afforded by both the V.M F. and the E.A. The pre-disposing antecedent of typhus is said by Dr. Dobell, to be a "defect in the V.M.F. compared with the quantity and quality of the E.A. to which the individual is exposed." Its cause, we find, resides in an excess of the E.A. over any possible condition of the V.M.F., while the fatality of the disease "is most influenced by the volume and intensity of the E.A. and defective V.M.F." Furnished with these valuable axioms with respect to continued fevers, we may proceed to extend our knowledge of apoplexy and paralysis, by following Dr. Dobell into the varieties of the E.A. The wisest may occasionally hesitate, both as to diagnosis and treatment in these cases. It cannot therefore but be productive of the greatest advantage, where there exists a doubt as to the rigidity of paralysed muscles, or the existence of a clot, or the presence of white softening, or the epileptiform nature of a seizure, to bear in mind with our author, that apoplexy results from an "arrest, permanent or temporary," in one or more of the functions of some part or parts of the cerebro-spinal system, caused by a toxic E.A., a mechanical E.A., or a degenerative E.A.

The prophylaxis is further much assisted in an anxious patient, by observing a defect in his V.M.F.; and in the event of decease, it cannot fail to prove of much solace to the relatives, to learn that the cause of the untoward event was to be ascribed to (A.) excessive defect in his V.M.F., compared with the quantity and quality of

his E.A. or (B.), which is "the most usual cause of fatality in apoplexy," an excessive defect of some part of the organism, independent of the influence of such defect on the quantity or quality of the V.M.F.

We dwell, and we regret but briefly, upon the etiological analysis of heart disease and pericarditis, which are found to bear an important and hitherto overlooked analogy to apoplexy and paralysis, if we may judge by the identity of their respective varieties of the E.A., which are again observed to be toxic, mechanical, and degenerative. Here again should a patient desire to ward off these affections, it is essential he remedy the defect in his V.M.F., which is their pre-disposing antecedent. To the medical body at large who are used to consider the causes of fatality in these diseases as originating in obstructed circulation, dropsy, and such like, it will be a source of much anxious reflection to know, that they have been altogether oblivious of the "excessive defect of the V.M.F. compared with the quantity and quality of the essential antecedent," concerning the "cause of which cause," it should be remembered, that "the E.A. may be in excess of any possible condition of the V.M.F."

In like manner we would commend Dr. Dobell's views upon gout and rheumatism to the serious notice of Drs. Garrod and Fuller, in whose works, by an inexplicable oversight, there is not so much as an allusion to the important dependency of these diseases on the V.M.F. and the E.A., which, if we consider their fatality, has a bearing, happily unfrequent, on "the cause of its cause," since "in very rare cases the E.A. is in excess of any possible condition of the V.M.F."

This constant antagonism of the V.M.F. and the E.A., to say nothing of the L.M.F., is very lamentable, and the more so, that like many other couples at variance, they cling to one another with a certain fondness which precludes the interference of a third party. This is the more to be deplored as such a state of things cannot fail to exercise a very depressing influence on therapeutical medicine.

Dr. Dobell is no less entitled to the credit due to having first called attention to this subject however, than for the industry with which he has garnered materials for the fifth lecture. Twenty-two out of the thirty-seven pages of which this lecture is made up, testify to Dr. Dobell's thorough freedom from bias, and his modest appreciation of the text of no less than eighteen authorities, not forgetting the *Times* and the Registrar-General. The accumulation

of so great a weight of evidence is irresistible, and we trust that for
the future few will be found to deny that syphilis, fatty degene-
ration, and anæmia, are very prolific sources of disease.

" Here, Gentlemen, we find ourselves, at last, near the end of that
cross-country ride, which I sketched out in my third lecture. We have
explored some of those different roads leading to the same end ; we have
discovered that some of those hills that appear to skirt the horizon, may
descend into the mists of the valley when seen from another point of
view. We have traced the lake, the stream, and the quicksand to its
source. In spite of some difficult ascents, some uncertain footings, and
many tangled paths, we have at length arrived at those *wells and springs
of disease and death*, which we are so apt to neglect while busy with the
disasters of which alone they have been the cause.

" Gentlemen, we are all members of a *practical* profession. We have
taken upon ourselves high and responsible duties, all culminating in
action. So long as we choose to assume these duties in a profession, as
yet so far from perfection, we are not justified in spending our time in
scientific investigations or speculations, unless they have for their end
some practical application *for the good of humanity*. It is the hope of
attaining such an end which has led me on in the design and labour of
these lectures.

" I think that such an end, such a practical application of the con-
clusions at which we have arrived, stands out plainly and unmistakably
before us. I hope, Gentlemen, that in your own minds you have antici-
pated me in coming to the same practical conclusion that I have arrived
at myself." .    .    .    .    .    .    .    .    .    .    .    .    .

" The conclusion at which I now arrive is this, that man may be the
instrument through whom *the capability of accomplishing these ends may be
preserved and restored to the organism*.

" The manner in which man is to exercise this instrumentality is the
next point for our consideration. But I think we have almost reduced it
to a necessary conclusion. For as we have plainly seen that the organism
is competent to take care of itself, provided that it possesses a normal
V.M.F., and is surrounded by normal conditions of life ; and as we have
also seen that the great causes of defect in the V.M.F., are *the vestiges of
disease and abnormal conditions of life* ; and as we have also learnt that the
diseases, from which the vestiges result, are *invited* by defects of the
V.M.F. ; and that when thus invited and received into the organism, they
are capable of being disposed of without leaving vestiges behind, if the
V.M.F. is free from excessive defect ; that thus these vestiges are due to
defective V.M.F. And as we have learnt that the earliest invasion of
defects in the V.M.F., upon which all the long and intricate succession of
ills depend as their germ—as we have learnt, I say, that this state of

germination exists at a period anterior to the manifestation of disease in its ordinary characters, and that it is to be found in the garb of slight impairments to the general health, the indications of which are more and more evasive and occult, the earlier the *stage of germination ;* and, finally, as we have learnt that it *is in this occult and evasive stage of germination that the defect is most easily and most efficiently to be remedied ;* I think you will agree with me in the practical conclusion at which I have arrived." .     .

" I wish, then, to propose, as the only means by which to reach the evil, and obtain the good, *that there should be instituted, as a custom, a system of periodical examination, to which all persons should submit themselves, and to which they should submit their children."*     .     .     .     .     .     .     .

" The examination should be reported in writing ; and, after due consideration, such advice must be given as a careful judgment may dictate, for the future conduct, pursuits, and habits of the patient, with a view to correcting any defects, or tendency to defects, in the organism. Advice must also be given as to the means of removing any vestiges of disease that have been detected, or if they are not removable, advice as to the best way of overcoming their influence, or of averting their increase. To this must be added precautions to be adopted in certain contingencies, which, according to the judgment of the case, appear probable."     .     .

" The next question is, then, what would be the effect *upon the profession* in a pecuniary and in an ethical sense. With regard to the pecuniary question, it is only necessary to observe that of course I do not expect that any man in good practice, whose time is profitably employed, could conduct such an examination and give such advice for the usual consultation-fee. That is, of course, out of the question. Every man who attempts to follow out the plan, will, I hope, require such a fee as shall enable him to give the necessary time and consideration to every case."

Have we not proved what we started at first by saying, " that it is not very easy to avoid doing Dr. Dobell a great injustice ; and that, by taking his words from his own mouth."

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*Aspirations from the Inner, the Spiritual Life ; aiming to reconcile Religion, Literature, Science, Art, with Faith, and Hope, and Love, and Immortality.* By HENRY M'CORMAC, M.D. London: Longmans. 1860. Cr. 8vo, pp. 370.

*Les Médecins Moralistes Code Philosophique et religieux, extrait des Ecrits des Médecins anciens et modernes notamment des Docteurs Français contemporains.* Par MADAME WOILLEZ. Paris : Baillière. 1862. 8vo, pp. 399.

IT does not come legitimately within our province to notice ethical

works, but those now before us present a peculiar claim to our attention, not alone from their beauty and excellence, but as being the utterances of our professional brethren, the first being from the eloquent pen of Dr. M'Cormac, of Belfast, and the other a collection of beautiful thoughts, collected by Madame Woillez, from the writings of our French confreres.

Dr. M'Cormac describes his book, and most truly, as not a sectarian book. It is simply, he says, the inculcation of spiritual truth, a spiritual religion, and a spiritual God; aspirations from the inner life, the life we do not see, but which, not the less, "resumes" our experience here, and, in a degree, the experience which is to come. For the earthly is in correspondence with the celestial life, and the spiritual truths of the present are also true for ever. He would raise, or strive to raise, each weary anxious heart straight to highest heaven. He would unite the beautiful, the elevated, the good, the pure ; reconcile religion, literature, science, art, nay, every precious and excellent thing, too much estranged, with religious trust and religious truth.

Right noble aspirations these, and right faithfully worked out. The task is one for which the education, the habits of thought, and the experience of life and death of a physician peculiarly fit him. The book reminds us of the proverbial philosophy of Tupper, but is immeasurably superior to it by its profundity, its learning, and the genial and catholic spirit it breathes.

Madame Woillez is a well-known and highly-esteemed authoress. Before withdrawing into repose, she was desirous of removing from the medical body the accusation of Atheism and Materialism, so often formed against it, and, for this purpose, devoted the last three years of her life to reading the writings of physicians, " elle parvint, abeille patiente, à en extraire les sucs les plus purs et à composer un véritable Code Chrétien, uniquement dû à cette même classe d'hommes que l'on prétendait dénués de sentiments religieux." The collection of maxims, thoughts, and reflections, that she has drawn from the writings of physicians, ancient and modern,—but chiefly contemporaneous Frenchmen,—makes her book one well worthy to take its place beside that of our countryman.

# PART III.

# MEDICAL MISCELLANY.

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*Reports, Retrospects, and Scientific Intelligence.*

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## RETROSPECT

### OF THE PROGRESS OF SURGERY DURING THE LAST DECADE.

BY

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#### SURGICAL PATHOLOGY.

It is impossible that advances could have been made in physiology, such
as the last ten or twelve years have witnessed, without a proportionate
increase in our knowledge of the principles on which we must combat
disease. I have no wish to encroach upon a province which does not
come within my domain; yet, their boundaries being conterminous
throughout a great extent, I find it impossible to avoid a reference to
physiology while engaged in the consideration of the present condition
of pathological knowledge.

If I might venture to epitomise the prevailing views of the principles
and forms of life, I would say that, as regards the former, life is now
looked upon less as a combination than as a correlative of the physical
forces, and that the forms of life are deducible from one common type.

Life comes to be recognised, not as electricity or galvanism, not as heat
or chemical action, nor yet as a combination of any two or more of these,
but as a condition of matter (I am not now speaking of the life of the
soul) changeable, under certain circumstances, into any of the other forms
of force, allied to all, identical with none. Ultimately we must refer it,
equally with all other physical forces, to the upholding will of the Creator.

In the words of Grove,[a] " Causation is the will, creation the act of God." The deduction of the various forms of life from a common type forms the basis of the theories of Darwin[b] and of Freke,[c] and may be found in a more practical form in almost every page of *Virchow's Cellular Pathology.* In the 27th page of this work, as translated by Dr. Chance, we find the following exposition of the doctrine :—

" At the present time, neither fibres, nor globules, nor elementary granules, can be looked upon as histological starting-points. As long as living elements were conceived to be formed out of parts previously destitute of shape, such as formative fluids *(plastic matter, blastema cytoblastema)*, any one of the above views could, of course, be entertained ; but it is in this very particular that the revolution, which the last few years have brought with them, has been most marked. Even in pathology we can now go so far as to establish, as a general principle, *that no development of any kind begins* de novo ; *and consequently as to reject the theory of equivocal* (spontaneous) *generation just as much in the history of the development of individual parts, as we do in that of entire organisms ;* just as little as we can now admit that a tænia can arise out of a saburral mucous, or that, out of the residue of the decomposition of animal or vegetable matter, an infusorial animalcule, a fungus, or an alga, can be formed ; equally little are we disposed to concede either in physiological or pathological histology, that a new cell can build itself up out of any non-cellular substance. Where a cell arises, there a cell must have previously existed *(omnis cellula a cellulâ)*, just as an animal can spring only from an animal, a plant only from a plant. In this manner, although there are still a few spots in the body where absolute demonstration has not yet been afforded, the principle is, nevertheless, established, that in the whole series of living things, whether they be entire plants, or animal organisms, or essential constituents of the same, an eternal law of continuous development prevails. There is no discontinuity of development, of such a kind that a new generation can of itself give rise to a new series of developmental forms. No developed tissues can be traced back either to any large or small element, unless it be unto a cell."

In this doctrine of *omnis cellula a cellulâ* is contained the germ of the advances of both sound physiology and pathology.

Virchow has elaborated the doctrine in its multitudinous bearings upon the healthy and morbid actions of the human body. One by one he has taken the various constituent elements of the tissues, and has traced them

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[a] Correlation of Physical Forces, by W. R. Grove, Q.C.

[b] Darwin on the Origin of Species. 1860.

[c] Freke on the Origin of Species. 1861.

I must not be understood as expressing any opinion on these theories. I have merely referred to them as expressions of prevalent opinions.

up to a common source—the cells of connective tissue; bone, muscle, nerve, skin, tendon, and fat, all own a common parentage; and, as there will be occasion to show further on, all morbid elements are derived by him from the same source.

In this view of the community of origin of cell-elements, there is a wonderful convergence between independent observers. As regards physiology, it must be left to others to follow out the subject, while here it is endeavoured to show its general bearing upon surgical pathology.

As life, in its relation to matter, appears to be a correlative of the forces of heat, motion, electricity, chemical affinity, &c., so the deviations from health seem to consist in the intermixture of one or other of these forces with the force of life.

Prior to the last decade, the chemical processes of degeneration of tissue became dimly known to us through the writings of Müller, Henle, Goodsir, and Reinhart. To the latter especially are we indebted for the first outline of the process by which albuminous tissues part with their vitality, and, becoming amenable to chemical laws, are converted into oil (by removal of their nitrogenous element),[a] prior to their final absorption. The identity of this decomposition with what occurs in disease was made out by Quain and Wagner; but it is especially to Virchow that we are indebted for thoroughly systematizing the entire range of fatty degenerations. He gives to the changes of which this is the principal, the term of *necrobiosis*, which he explains to mean " death, brought on by (altered) life—a spontaneous wearing out of living parts—the destruction and annihilation consequent upon life—natural as opposed to violent death (mortification)."

It is not necessary to follow Virchow through the minutiæ of this subject; it is sufficient to point out how, in the typical writings of the past decade, life is looked upon as a condition, not as an entity; and disease as a disordered condition.

The all-important signification of these views for the right comprehension of most morbid processes, and, above all, of the dyscrasiæ, must be too evident to require further amplification.

Men are now accustomed to look for the seat of life, not in any one central organ, whether the distributor of a grosser or of a more subtle (supposed) fluid, nor in the blood itself, nor yet in the tissues alone; but in all parts of the body in proportion to the activity of the changes which are the evidence of life. As a necessary corollary of this view of life, we look upon disease, not as a disturbing element, introduced into the blood or the tissues, but as a disordered condition of structure, sometimes produced, it may be, by the introduction of morbid material, often without

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[a] Michaelis (Prager Vierteljahrschrift, 1853) has supplied this missing link, by showing that ammonia is developed during the oily metamorphosis of albuminous tissues. Simon in Holmes' System of Surgery.

such introduction, but always of more importance than any such material
virus; and to be treated by medicines and means, such as will enable the
natural excretory organs to eliminate the dead or disordered tissue, and
not by drugs, which are to act as direct or chemical antidotes to a
poison.

Hence, for example, in syphilis, the use of mercury, where it is used at
all, is modified materially by these views. Men, at least sensible men, do
not now deluge their patients with mercury as a specific, which is to
circulate through the capillaries, or enter into the tissues and annihilate a
syphilitic virus where it meets with it—a doctrine propounded not many
years ago by some of the ablest teachers in the land; but they give it,
even when they rely too exclusively upon its powers, as an eliminator of
dead or disordered, or enfeebled tissues. No doubt there are forms of
the disease in which it surpasses all other known excitors of the elimi-
nating organs (such, for example, as congenital syphilis), but for all that,
it is year by year more universally acknowledged that other means will
cure the primary disease, and that mercury cannot insure immunity from
secondaries, no matter how carefully and to what extent it be exhibited:
hence the inevitable conclusion that it is not an antidote in the old sense
of this term; and so with other diseases and other remedies. As the
former cease to be looked upon as entities, so the latter cease to be
regarded as specifics. Such advances in pathology then are not to be
despised, seeing that they open the way for sound principles of treat-
ment.

A pregnant source of progress in modern surgery (and medicine) is to
be sought in the tendency of men to individualize disease. As the
functions and forms of life are found to present as many aspects as there
are individual men, so are the disordered functions and forms of disease;
families, and groups, and classes, may be made for the convenience of
instruction; but year by year the great truth is more widely recognised,
that diseased action is as diverse as man; and the results which spring
from this truth are of immense and wide-spread importance.

Two causes seem principally at work in the production of this view of
disease. The great extent and accuracy of microscopic investigations, and
the increase of medical journalism. As, in many other great changes,
the agents who have brought this about may have been, to a great extent,
unconscious of the tendency and effects of their labours. Thus, some
five years ago, a grand controversy raged in Paris on the subject of
microscopic investigations, and if we were to judge of their value by the
conflicting opinions which were then evoked, or by the absence of any
definite formulæ as their recognised result, we should be obliged to
conclude that their contributions to science had been uncertain, and that
their practical importance was of the very smallest amount. And yet
how many errors, and, what is of more importance, how many sources of

error were discovered and got rid of by this discussion, how firmly it enabled us to grasp the truth, and to wield it for future use. Many hasty generalizations—many crude and ill-digested speculations—many theories founded on a too narrow basis, or resulting from incorrectness in manipulation, were here disposed of, and, when the angry tide of debate had ebbed, men's minds settled down to realize the true results of the discussion.

The most important of these was the infinite variety of morbid growths, a striking example of the individuality of diseased action. Discoverers are always apt to generalize too soon and from too narrow premises: hence the microscopists of the previous decade laid down with too great rigidity the characters of morbid cell-elements; the cancer cell, for example, was not only characteristic of the growth in which it forms the principal element, which is true, but it was heteromorphous, foreign to the body, of parasitic, or at best unknown origin. Each successive observer of the structure of tumours has pointed out peculiarities unnoticed before, and perhaps has founded a new species or variety of growth, insisting mainly, it may be, upon the differences between what he has seen, and what others have put on record as the results of their observations. Gradually the varieties are so multiplied that the shades of difference between them become less and less broadly marked, and men's minds suddenly open to the conviction that these numerous peculiarities point to a common origin, modified by individual influences.

The expansion of medical journalism is connected also with this increasing tendency to individualize disease. Whether as cause or effect may be a matter of opinion. Certainly there is a constant stream of cases and observations ready to fill the pages of every journal, and each writer strives for originality, or at least for some peculiarity in the cases he records.

As before remarked, there is a wonderful convergence of opinion on the common origin of morbid products. We find independent observers, who had followed different routes, arrive at the same conclusions.

Virchow, for example, in page 445 of the already quoted work, when speaking of the origin of pus, says:—"If now, in the next place, we investigate the history of suppuration, we immediately discover that we must distinguish two different modes of pus-formation, according, namely, as the pus proceeds from tissues of the first two kinds mentioned in our classification, *i.e.*, from epithelium, or from connective tissue." He had previously spoken of the origin of the former from the latter, so that ultimately the pus cell would derive its origin from the connective tissue corpuscle; further on he shows how—" deeply-seated pus-formation regularly takes place in the connective tissues. In it there first occurs an enlargement of the cells, the nuclei divide and for some time multiply exceedingly," &c., &c.

Again, speaking of tubercle, he says (p. 94) :—" If the development of these corpuscles be investigated, it is easy to convince oneself that where-ever they occur they arise out of previous organic morphological elements, and that they are not by any means the first bungling products, unfortunate essays of organisation ; but that they were once well-grown elements, which, by an unhappy chance, were early checked in their development, and early succumbed to a process of shrivelling. You may with certainty assume that where you meet with a largish corpuscle of this description, a cell had previously existed ; and where you find a small one, there once had been a nucleus, enclosed, perhaps, within a cell. . . . I am of opinion that tubercle is necessarily of a cellular nature, and generally, just like all new formations, has its origin in connective tissue."

Again, not to be tedious, in page 454, he has a figure which represents the development of cancer from connective tissue in carcinoma of the breast, showing the various stages of the process in the division of the nuclei, then of the cells, their grouping together and enlargement. He also asserts similar stages in the development of cancer, cancroid, and sarcoma.

Here we see the ablest foreign microscopist and pathologist of the day deriving the principal morbid products from one common element—the connective tissue corpuscle. Let us now see how our greatest British authority treats the same subject :—

" One cannot but conclude that the cells of pus from wounds are ill-developed or degenerate granulation cells. . . . The many characters of imperfection or of degeneracy that pus-cells show accord with this view ; such as the general imperfection of their nuclei ; the frequent abundance of fatty-looking granules in them, the large quantity of fatty matter that analysis detects in pus, and the limitation of the cells to certain forms, beyond which they are never found developed, though none of those forms is more highly organised than that of the youngest or most rudimental granulation-cell."[a]

It is strange that one who could speak so plainly of the parentage of the pus globule should not have perceived the affinity of tubercle and of cancer to the same elementary cell ; but he goes close to it with Schrœder Van der Kolk, whom he quotes, as referring pulmonary tubercle to the degenerate epithelium of the air cells.

Dr. Wilks,[b] in a paper on cancer and new growths, expresses his opinion that these have their origin in a " purposeless effusion of blastema," which material, in healthy subjects, would become organised for repair or healthy growth, but in the unhealthy is converted into unnatural forms. He boldly proclaims both the local origin of cancers and the influence of

[a] Paget's Lectures on Surgical Pathology, Vol. i., p. 233.
[b] Guy's Hospital Reports, Vol. iv.

the constitution of the individual, but in terms too diffuse for quotation.

If I venture to introduce into such distinguished company the words of one who claims to be only a diligent observer of the microscopic elements of tumours in connexion with their clinical history, it is because they express what, as regards this branch, seems to be the result of the labours of microscopists in the past decade :—

" Of growths which are not cancer, but which equally with it have their origin in the lymph-cell, and are interstitial or infiltrating, there are almost as many varieties as there are cases. After reading most of what has been written about them, and having seen a good many, I am satisfied that this whole class may, for practical purposes, be included in the following formula :—' *The nearer in form and power of development that the constituent cells of a tumour are to the healthy lymph-cell, the more innocent is the tumour: the further removed, the more destructive.*' Thus we find the healthy lymph-cell small, circular, slightly granular, with a little nucleus, and developing into a fibre. Our simplest tumours are composed of cells, scarcely, if at all, to be distinguished from the above; and these white fibrous, or desmoid tumours, are the most innocent possible growths, as a general rule. A stray exception may occur, now and then, to prove the rule. We then come to fibroid, fibro-nucleated, recurrent fibroid, fibro-plastic, fibrinous tumours, named according to the fancy of writers, who recognise alike their similarity to simple fibrous tumours, and their divergence from them. These are of variable malignancy; they are of as variable minute construction. Not only do their constituent cell-elements differ more or less in form from the primary lymph-cell, but they also differ in power of development. Some remain always as cells, and never develop into fibres; these are the most recurrent. Some make attempts at development, and hence the caudate cell of various form; some appear only as nuclei, without external cell-wall. Again, power of development into fibrous forms is quite different from active reproduction; generally it is not associated in the same cells. The recurrent tumours are masses of rapidly produced cells, or nuclei, with no attempts at the formation of fibre.

" Cancer itself can be brought under the above law. It is no heterologous or parasitic formation. It is simply a monstrously abnormal plastic growth; its cells differ as widely as possible from the healthy type. In acute cases they are rapidly produced, make scarcely an attempt at development, and die off with rapidity; in schirrus they are formed more slowly, and in much smaller numbers, live longer, and make some attempt at caudation, but they are still further removed in form from the typical cell of healthy tissues.

" The more I think over the subject of morbid products, the more I am convinced that, in the above formula, we have the expression of a law

that includes most of their phenomena. It will, slightly modified, apply not only to large classes of tumours, but also to tubercle and to pus. Tubercle is a lymph-cell, of low vitality, incapable of development into healthy fibre, dying after a short existence, and generally becoming a foreign body. Pus may be described in words almost identical—their material difference being one, probably more of chemical constitution than of vital power—for both are possessed of almost a minimum of vitality. Tumours are composed of cells whose vital force is greater than pus or tubercle; and this vital power is rather spent in reproduction than in development, as in the healthy cell. The ordinary plastic cell goes through certain phases, dies, and is removed; its place is taken by a new cell, developed, probably, from the nucleus of its predecessor. The abnormal cell fails to arrive at perfection, often becomes a monstrosity, and has a tendency not only to reproduce itself from its nucleus, but to generate, in neighbouring lymph, organisms similar to itself. Thus the constituent cell of the tumour has a certain independent vitality, similar to that of the entire tumour; or rather the converse is true—the tumour is composed of cells of independent vitality, and hence it possesses the same form of life with the cell. And, as the life of the cell is of a low type, so is that of the tumour. I cannot but think that many of the able minds which have been engaged in studying cancer, in its minute anatomy, have failed to make an adequate impression upon practical surgery, because they have been led away to look on cancer as a thing quite different from any of the ordinary structures of the body, instead of a perverted form of a natural structure. And I am sure that their views, carried out to their legitimate conclusion, would lead us to despair of any remedy for cancer but the knife, or other agents of destruction. Whereas, if we regard the cancer-cell merely as a perverted lymph-cell, we shall never rest until remedies are found which will influence it—*i. e.*, the lymph-cell—to a more healthy type.

" I am sure we neglect too much the auxiliary treatment of good tonics, especially mineral tonics, good air, and abundant food, with proportionate exercise; and we should have slower tumours, and fewer relapses, if we compelled the attention of our patients to these matters."[a]

These various extracts indicate a common direction of thought in their authors, and help to prove the proposition that, the result of pathological studies during the past decade has been the recognition of a common type for forms of disease, which had not been clearly recognised before. The consequences of this recognition must be to simplify much that was obscure or confused. The entire range of inflammations, whether simple, strumous, or rheumatic, together with all tumours, innocent or destructive, are shown to have as their *point de depart* the same cellular element; and

[a] On Cystic Disease. By Maurice H. Collis. Dublin Quarterly Journal, Nov., 1860.

however various the immediate change may be which is thus produced on the typical cells, it is not a little remarkable that the mode of their death is the same, whether they have run their course as lymph, pus, cancer, or tubercle—namely, oily metamorphosis.

The student who would follow out the whole series of fatty degenerations, the result of inflammation, will find a clear and simple statement of them in Mr. Simon's paper on inflammation, in *Holmes's System of Surgery.* Some parts of this essay are so important, as condensations of our present state of knowledge, that I cannot refrain from quoting them :—

"Let the student examine inflamed muscle, as for instance, in the *post mortem* examination of a compound fracture, or of a recently made stump. He will find the structure weakened, so that it easily gives way with pressure or traction ; he will see, under the microscope, that the substance tends to fall into irregular fragments ; that its natural striation is more or less replaced, first by an almost homogeneous appearance, and afterwards by an appearance of aggregated granules; that, with these granules of albuminous matter, into which the muscle has resolved itself, there is mixed, even from an early date in the inflammation, a noticeable quantity of oil drops ; that often these oil drops appear before the disintegration of muscle has made much progress, and then arrange themselves in such mutual relation, tranverse or longitudinal, as to suggest that the sarcous elements have changed themselves, particle by particle, into oil; that, little by little, the oil drops multiply to such an extent as to be the chief visible objects ; the limitary membrane of a fasciculus seeming now to be almost filled with finely divided oil, diffused through some scanty connective albuminous material ; that the limitary membrane, within which the muscular tissue is thus emulsionized, tends also itself to undergo dissolution, and let its proceeds confuse themselves with the similar debris of neighbouring fasciculi, till more or less bulk of muscle is reduced to a state of oleo-albuminous liquidity, and from this point, if the observer have the opportunity of watching the changes which lead to convalescence, he will see that gradually the liquified material diminishes in volume ; that, in proportion as it vanishes, the adjoining parts adapt themselves to the altered relation ; that eventually only a scar-like puckering of substance remains to mark the place where muscular material has irrevocably melted away.

"Let him examine inflamed bone—as for instance, in a carious vertebra ; he will see that the structure breaks down under his finger, and offers scarcely any resistance to a knife, that the microscopic texture is rarified—cancelli, canals, lacunæ, being all larger than natural, and the solid framework all scantier ; that the material is tending to break into its component parts, and to undergo changes, which admit of its being removed by the circulation. In many cases, (for example under the irritant pressure of an aneurism), he will find that a quantity of bone has

thus gone, leaving no trace behind—gone, of course, only after having first become liquid ; and it appears that when bone is inflamed, the first step towards this disintegration consists in a breach of the ordinary union between the mineral and cartilaginous constituents, with a primary removal of the former and a chemical change of the latter. If there be discharge from the inflamed part, there will be found in it bits of bone, chemically and microscopically demonstrable.

" Let him examine inflamed nerve ; he will find the medullary cylinder of each nerve-tubule falling, as it were by cross cuts, into irregular pieces, at first large, but as the process advances, getting smaller and rounder and assuming the character of oil, till at last the tube-membrane is filled with oily material which gradually undergoes removal.

" Let him examine the hard texture of an acutely suppurating joint ; he will find the strongest ligaments in course of being reduced to an incoherent state—either actually pulpy and half liquified and in course of removal, or ready to break with the least traction ; he will find, unless proper splintage have been used to prevent it, that dislocation is occurring from this cause ; he will find, if the inflammation have been primarily synovial, that the cartilage is smoothly melting away at its surface, into the fluid which bathes it ; or if the disease has begun subarticularly, that the cartilage, where superjacent to carious bone is irregularly eroded and perforated ; and throughout, with the microscope, he will find, wherever there are evidences of advancing disintegration, that the softening material is abundantly marked with oil drops."

It would be tedious, in such a retrospect as the present, to go with a great minuteness into the various modes of fatty or oily degeneration which affect all morbid cell elements. The principle is the same in all—namely, that when the life of a cell is over, chemical force takes the place of vital, and the gradual dissolution of the cell commences.

I must pass on now to consider how far these sound principles of pathology, which the last ten years have evoked or confirmed, have already borne fruit in practice, and to eliminate what seems to me of permanent utility from the copious suggestions with which our medical literature abounds.

### SYPHILIS AND GONORRHŒA.

Is Andral's dictum true, that syphilis is so systematic, so symmetrical, that it may serve as a key to all pathology ? Let the following aphorisms, culled from the works of the last ten years, answer :—

Blennorrhagia and chancre are two affections entirely distinct.—*Ricord, Egan, Acton, Labatt,* &c.

The venereal virus produces two principal results—1, a local inflammation (blennorrhagia); 2, a form of ulceration (chancre).—*Vidal de Cassis,* after *Hunter,* &c.

Blennorrhagia is a local inflammation, *Ricord*, *Vidal*, &c., and never gives rise to constitutional syphilis.—*Ricord*, *Porter*.

The matter of a virulent gonorrhœa may produce abrasions, and be followed by mild cutaneous eruptions.—*Egan*, *Vidal*, *Baumés*, *Requin*.

A non-indurated chancre is always a local disease, and is never accompanied or followed by secondaries; the bubo resulting from such a sore is suppurative.

An indurated chancre is the evidence that the venereal virus has poisoned the system, and has returned to the sore. The gland resulting from it is indurated.—*Ricord*, *Acton*, *Montanier*, *Maisonneuve*, &c.

A mild form of constitutional symptoms may ensue after a simple primary (non-indurated) sore.—*Egan*, *Labatt*, &c., after *Carmichael*.

Every form of primary disease may be followed by constitutional affections, the nature and duration of which no one can predicate.—*Holmes Coote*.

Where phagedæna is the primary affection, secondary symptoms may not arise for ten or fifteen years.—*Ibid*.

The peculiar danger attending indurated chancre arises from its being obstinate and chronic in its course; the longer the primary disease remains, so many more are the chances of constitutional affection from absorption.—*Ibid*.

There is no regular interval between the introduction of the poison and the development of its effects. There is often no attempt at its elimination, either by the formation of a bubo, or by eruption, or by fever; there is nothing periodic or critical in the character of the disease; it never wears itself out; it never recovers or subsides spontaneously; and though the virulence of the disease may abate and the symptoms disappear, it leaves the patient as deeply poisoned himself, and as capable of conveying the virus to others, as he was before. Finally, one or any number of attacks of lues, will not protect him from future contamination.—*Porter*.

It appears to me that the poison, in general, wears itself out, except in the very severe cases.—*Holmes Coote*.

Elimination of the poison by the skin is the natural method of cure.—*Weedon Cooke*.

A man who has once had an indurated chancre can never have a second. Inoculation from any source in such a man will only produce non-indurated sores.—*Ricord*.

Syphilization is a state of the organism in which it will no longer evolve the syphilitic virus, in consequence of a state of saturation.—*Auzias de Turenne*.

Syphilization is undoubtedly useful against syphilis; it is the only certain remedy that we know, and it is not pernicious to the organism; mercury, therefore, ought to be banished as a curative remedy.

Syphilization is not so certainly useful against mercurialized syphilis,

but it ought always to be tried; it often does cure it entirely, and it at least does not fail to do some good in the greatest number of cases.—*Boeck*.

I believe *mercury* to be a specific for syphilis.—*Porter*.

It is a doubtful question whether mercury is a remedy at all for syphilis. In my opinion it would be wrong to give a hundredth part of a grain of mercury to a syphilitic person who had not been before mercurialized.—*Boeck*.

Of 300 cases of secondary syphilis, who were treated by syphilization, 290 were cured.—*Ibid*.

The true explanation of cures by syphilization is the abstinence from mercurial treatment, and the eliminating power of nature.—*Weedon Cooke*.

A chancre is the only source of syphilis.—*Ricord*.

The semen of a diseased man may infect the woman with whom he may have connexion, even though she never become pregnant.—*Porter*.

Pus from a primary affection is the only contagious element in the disease. It may be secreted by the skin, by a lymphatic vessel or gland, and the ulcer which supplies it may be simple, indurated, or phagedænic. No secondary or tertiary affection is capable of being communicated by contagion.—*Ricord*.

That mucous tubercles may be transmitted is generally acknowledged. *Vidal*. But mucous tubercles are *often* a primary affection.—*Ricord*.

The blood of a patient with secondary syphilis has produced tubercular and pustular eruptions, when introduced into the system of a healthy patient by inoculation.—*Waller of Prague*.

I have great reason to believe that in many of the cases, where a nurse is said to have contracted syphilis from suckling a syphilitic child, the disease has been merely *thrush*. This appears to me partly to have been a source of error in Ireland!—*Acton*.

A woman who has never had a chancre, but who has constitutional syphilis, may bear a pocky child, who may infect the nurse.—*Porter, Diday, Vidal, Waller*, &c.

A child may be affected *in utero*, but once born, only by direct contagion; at least poisoning through the milk of a syphilitic nurse is not proven. Equally unproved is the contamination of the nurse by a child which has not primary sores.—*Ricord*.

Many more opposing aphorisms might be accumulated, if necessary, for my purpose. This is to point out how impossible it is to dogmatize on the subject of syphilis in the present advanced state of pathological knowledge, without meeting with an opposing truth, no matter in what direction our prejudices or imperfect observations may lead us.

*Varieties of Primary Syphilitic Sores.*—The opinions of Ricord, Porter, Lee, Weedon Cooke, and many others, all tend to recognise the individual

as the modifying agent of the poison; and such must manifestly be the truth. Dissecting wounds affect the system or not, according to the state of health of the individual, and syphilis has much in common with them. The sanguineous man will develop an active inflammation, with a tendency to soft chancre and suppurating bubo; the man of languid circulation, on the other hand, has a tendency to chronic induration, both local and glandular. The whiskey drinker is notoriously subject to phagedæna, whether ulcerative or gangrenous. Each, according to his natural temperament, or temporary condition, has power to modify a poison which, of itself, has been modified by the source from which it was derived.

It is manifest that contagious disorders acquire virulence of action by concentration and rapidity of circulation. An epidemic is modified by a hundred circumstances; and syphilis, as any other contagion, is equally subject to continual alterations. It is no mathematical quantity of unvariable value, but an ever fluctuating power which it requires much calculation to determine. Like all other diseases, it is not an entity but a condition, and the minds of men should no longer be diverted from the due recognition of this fact, by the circumstances of the system coming under its influence through the operation of a virus.

Its modes of action are reduced by Lee to four, namely,—Adhesive, Suppurative, Ulcerative inflammation, and Mortification, the first only being followed by constitutional symptoms, and requiring mercury. His views are given at length in *Holme's System of Surgery*, to which we must refer our readers.

*Of Improvements in Treatment.*—The principal is the reintroduction of mercurial fumigation, long since recommended by the late Mr. Colles, whose cinnabar candle was well known to us as students. Mr. Langston Parker[a] has been the steady supporter of this plan of treatment for upwards of twenty years. It is now in very general use in London; combined with the vapour bath, it is an admirable mode of bringing the system under the influence of the medicine. Syme holds that the mineral should be used only as an alterative and absorbent, in which view he is followed by most people, only that some hold that it may be pushed until it touches the gums without interfering with this mode of action.

For my own part, I would use it for syphilis as for any other complaint, regulating the amount and frequency of the dose according to the circumstances of each case, and, as Mr. Porter used to say, according to the apparent strength of the patient.

*Inoculation.*—On the subject of treatment by inoculation, many of the contradictory statements and many fallacies are got rid of, if Mr. Porter's

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[a] Reviewed in our August Number.

law be anything like universally true—that the poison will not return on itself. As a means of cure, inoculation is acknowledged to be uncertain, even by Boeck, whose statements go no further than to show that after its use the disease ceased to manifest itself externally. Here we should have the test of power to propagate healthy children, before we could admit that a cure was proved. Syphilization, as a means of cure may, however, be allowed to die a natural death ; and as a means of diagnosis, Mr. Porter's law shows it to be of no practical value, for in doubtful cases no one would try the question by syphilizing what Ricord calls a virgin subject. No doubt, laws are not absolute, being, after all, only the expression of the experience of one or more men on certain points, but they are of great negative value.

In the physiological history of inoculation, Ricord has developed many points of practical interest, such as that the period of incubation is in proportion to the depth to which the poison penetrates, and that for the production of a chancre, an abrasion is necessary. This is, however, denied by Labatt. Ricord also points out that chancres only poison while p ogressing as chancres, or at least when not healing. We must caution the readers of his letters against confounding his *ulcus elevatum* with our elevated ulcer ; the former being an ulcer with raised edges, the latter with elevated fungating surface.

*For Tertiaries*, an addition to our treatment is given by Gamberini, of Bologna, in the form of iodide of sodium, the advantages of which are stated to be, that it is better borne by the stomach, and has a more agreeable taste ; that it has for its basis a salt which is a normal constituent of the body, to a large extent, and that it produces less iodism. We can here only refer to the interesting remarks of the same author, on the truces of syphilis, in the 17th volume of this Journal.

*Gonorrhœa.*—The treatment of this affection has varied little in the past decade. The local nature which is all but universally ascribed to it, has led more men to treat it by simple local astringents. It gradually passes back along the urethra, and if it can be cut short before it reaches the sinus pocularis, epididymitis will not come on. Dr. T. Chambers[a] believes even that it will get well spontaneously, from two to three weeks, if let alone. It may be observed, that in all inflammations, local remedies must be applied weak and often while the action is acute ; strong and seldom when it is chronic. This should be followed out in gonorrhœa : two grain solutions of alum to be used every half hour in acute cases, and in chronic, a drachm or two to the eight ounces—used twice or three times a day. In the intermediate stages, intermediate strength and frequency of injections, in an inverse ratio, should be adopted.

[a] Lancet, June, 1861.

So in *gonorrhœal ophthalmia,* a half grain solution of nitrate of silver applied every half hour will almost invariably cut short the disease in 24 hours. Carefully carried out it will scarcely ever fail.

The following law is capable of wide application, both in inflammations, internal and external, and for the exhibition of many medicines. *The more acute the diseased action, the weaker and the more frequently applied should our remedy be; the more chronic the action, the stronger and less frequently applied.* In recommending injections as sufficient to cure gonorrhœa, it is not intended to exclude the use of such general treatment as may seem necessary, such as purgatives, antispasmodics, tonics, &c., but the use of the nauseous and disgusting cubebs, copaiva, or terebinthinates, may be altogether dispensed with.

Mr. Weedon Cooke, Mr. Borlase Childs, and Mr. Warner[a] corroborate the value of injections above all other treatment. Their favourite astringents are the chloride of zinc, perchloride of iron, and solution of the pernitrate of mercury; more especially the last, at the strength of half a minim to the ounce of water. Cures are said to have been effected by the last after six injections, and the disease seldom exceeds 10 days in duration.

MM. Caby and Moulson[b] speak highly of bismuth as an injection. The bismuth to be well washed; and 20 parts are to be mixed with 200 of distilled water.

In *gleet*, Adams recommends the use of five grain doses of Chian turpentine, its action being upon the follicles and ducts of the prostate. Muriate tincture of iron and tincture of opium will often render the discharge in such cases somewhat purulent, when injections will effect a cure.

### DISEASES OF BONES AND JOINTS.

What is new and proven on this subject is well condensed in Mr. Barwell's book.[c] The views of Virchow on the nature of inflammation, as a hypersecretion in the first instance, are supported.

*Synovitis* is shown to be from the first accompanied by increased moisture. Dr. Fuller, following Todd, attributed the rheumatic tendencies of fibrous tissues to a peculiar attraction which he supposes them to possess for lactic or lithic acid; but seeing that the decomposition of these very tissues will produce lactic acid, it is more reasonable to attribute the presence of the acid in the blood and in the tissues to such decomposition, and not the decomposition to the presence of the acid; such is Barwell's view.

*Cartilage.*—Brodie's ancient theory, that the cartilages are the seat of active vascular inflammation, has gradually been subverted; first by

[a] Lancet, Oct. 12, 1861.
[b] Medical Times and Gazette, June, 1861.
[c] Barwell on Diseases of Joints.

Aston Key, then by Richet, Ecker, Goodsir, Redfern, Birkett, and Bryant. The reaction of opinion, as usual, was excessive, and all changes in cartilage were ascribed to atrophy, in consequence of the proved absence of all vessels in its structure. The proliferation of cartilage cells from inflammation, laid down by Virchow, is claimed as a discovery by Barwell; probably both arrived at the same conclusion by independent reasoning. He shows, with Virchow, that ulceration of cartilage depends upon fatty degeneration, and that true inflammation of cartilage consists in a hypersecretion of the cells; he denies that the latter occurs as a primary affection; it is for him always a result of synovitis or osteitis, but it is no less an active process, partaking of the nature of inflammation in other structures, in that it is characterized by increased activity of production.

*Osteitis.*—Mr. Erichsen has done good service by drawing attention to the fact, that in disease of the tarsus the bones are primarily affected, the joints remaining free until a later period. Osteitis, and not synovitis, is to be combated : hence, as he advises, excision of the individual bone or bones should be done. I have found free incision into the body of the bone equally useful in some cases ; these bones are peculiarly liable to congestion, which runs on, if unchecked, into suppuration and caries ; they rarely become necrosed, and a free and timely opening may cut short the process of destruction. Mr. Barwell has pointed out a similar fact as regards the articular ends of long bones in children, which accounts for the readiness with which joint inflammations light up in early life. The growth of the bone takes place mainly, as is well known, at the epiphysary junction : hence, there is a permanent and normal hyperæmic condition of the bones at this point as long as active growth is advancing, and it needs but some trifling cause to increase hyperæmia to congestion, and when congestion takes place, either active inflammation may quickly come on, or a low state of nutrition be induced, which will run into strumous osteitis, and the whole train of chronic disorganization of the joint. Klose[a] and Chassaignac[b] describe as something new that formidable inflammation of the shaft and ends of the large bones which we have long known in this country as complete acute necrosis, where the entire thickness of the bone perishes suddenly from inflammation, frequently destroying the life of the patient, as well as his limb. Klose had seen the disease in the young in whom it is more common, for the reason already given ; Chassaignac had seen it in older patients ; Gosselin points out their identity, and names it acute suppurative epiphysary osteitis. Instances of the disease have fallen under my own notice in the shoulder and in the knee, destroying the limb, and ultimately the life in the latter

[a] Prager, Vierteljahrschrift, Jan., 1860.   Epiphysentrennung *or* Meningo-Osteo-Phlebitis.

[b] Monograph sut L'Osteo-myelitis.

case, and only stayed in the former by very free incisions down to and along the bone; on a small scale we see it in paronychia osseosa of the nail-phalanx, or bone-felon as it is termed by the Americans.

*Morbus coxæ.*—Rust, of Vienna, asserts that osteitis is the invariable starting point of hip disease. No doubt this is true of chronic morbus coxæ, whether strumous or rheumatic, but the acute disease is clearly synovitis; the great width, depth, and fulness of the gluteal region, the swelling and tenderness in the groin, and behind the trochanter, the marked increase of heat, great pain on motion, and, above all, the very rapid destruction of the joint, all prove that the synovial membrane and softer tissues are primarily engaged.

Mr. Smyly has drawn attention to the fixity of the joint in the early stage of chronic disease, as evidenced by rotation of the entire pelvis taking place on the sound joint when the affected limb is grasped and rotated; as a means of diagnosis, in doubtful cases, this manœuvre is positively invaluable.

The rarity of dislocation on the dorsum of the ilium is recognised by all writers, upon the subject of hip disease, in the last decade—the symptoms supposed to be characteristic of it being attributable to absorption of the head and neck of the os femoris, and to expansion of the acetabulum. Tessier,[a] of Lyons, asserts that prolonged immobility of a joint may not only aggravate existing disease, but produce various lesions in a joint previously healthy, so that five or six months' perfect rest sufficed to destroy the synovial membrane and cartilages. Hilton[b] in delivering his admirable lectures on pain, gave a striking contradiction to this statement, by exhibiting the cramped and unused foot of a Chinese lady, in which the articular surfaces had remained uninjured under the strongest possible pressure and the most absolute immobility.

*Treatment.*—A combination of nitrate of potash and antimony is recommended for acute synovitis in strumous patients, in place of mercury, by Barwell. In the use of leeches lowering the patient should be guarded against, for unquestionably suppuration follows their use when pushed too far. In fact, in any case of acute inflammation such a result may occur, and if it be wished to favour the formation of matter, it can often be done by grouping a few leeches over the spot where this result would be advisable.

In addition to the chlorides for purulent infection and deposits in joints, the hyposulphites have been vaunted. Paoli recommends the sulphites either injected into the veins or internally administered in cases of this kind, and in all diseases arising from an animal ferment—but this has yet to be tested.

[a] Coulson in Lancet, April, 1854, and Braithwaite, Vol. 30.
[b] Published in Lancet, November, 1861.

The advantages of free incision into joints which are full of pus and shreds of cartilage, were laid down, just ten years ago, by Mr. Gay,[a] he showed the inadequacy of sinuses for free discharge of these products of destruction, and pointed out the reparative power of joints when freed from their presence. In this he was seconded by Adams of London, Brodie, and now by Barwell. Subcutaneous section in hydrarthrosis, practised by Goyrand, seems to have met few followers; nor have Velpeau and Bonnet's injections of iodine. Some good cases of the latter are given by Dr. M'Donnell of Montreal,[b] but we have not found reason to use it in Dublin; as firm pressure, with cold or stimulating lotions, generally reduces the swelling to reasonable dimensions, and Scott's stimulating strapping does the rest.

For chronic synovitis, as well as for the more medical ailments of rheumatic gout, the Turkish bath is of essential service, as are also the various modifications of hot air and vapour baths.

As remedies for the pain in strumous joints, Jobert de Lamballe recommends an ointment of from one to three drachms of nitrate of silver to the ounce of lard. This acts as tartar emetic ointment does, by producing an ecthymatous eruption. Veratrine ointment is recommended by Klinger.[c] The actual cautery is highly praised by Syme, and recommended with all the persistence and energy of that able surgeon. Barwell speaks disappointedly of it. The danger is, undoubtedly, lest it should become an irritant instead of a counter-irritant. Lebert speaks highly of the douche, in the later stages of cure, as a stimulant to absorption of plastic deposits. Coulson advises it for hyperæmic and congested condition of the epiphyses.

Solly places the greatest confidence in repeated issues in strumous joints, and states that he has almost invariably succeeded in obtaining either anchylosis or a useful joint by patient perseverance; as a proof of which, he has been called on to amputate for white swelling but twice during his long career as a surgeon.

*Chronic Rheumatic Arthritis.*—The writings of Robert Adams and R. W. Smith on chronic rheumatic arthritis have been so long before the profession, and are so well known, and highly appreciated, that we have not thought it necessary to refer to them on the present occasion. The splendid monograph of the former surgeon has exhausted the subject.

### EXCISIONS OF JOINTS.

" Removal of a joint may be called for to save life in the height of an acute disease, to cut short the wearing process of a chronic and incurable

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[a] Paper read before the Medical Society of London—Med. T. & G.. Vol. 24.
[b] Montreal Medical Circular, 1857.
[c] Dublin Hospital Gazette, February, 1854.

disease; to rid the patient of a deformity and encumbrance."[a] In deciding on operation, and *mutatis mutandis*, in making the choice between excision and amputation, " the most essential questions are :—Is the patient's constitution capable of ultimately conquering or healing the disease? If so, will the limb be of value or an encumbrance? In his worldly circumstances is it possible for him to await a long, and, perhaps, a doubtful process of cure ?"

Now, in the first place, as regards acute destruction of joints, as a rule free incisions will save us the necessity of either excision or amputation. Where they will not do so it is because the cases run into the category of chronic disease.

As regards chronic disease, the rule will be different for the child and for the adult. Children have great powers of recovery, both local and constitutional. Many a condemned limb has and can be saved by patience. If operation be clearly necessary, it must be remembered that after either excision or amputation in the child, the remains of the limb are dwarfed and withered as compared with the sound limb. This point is set at rest by Pemberton[b] and Syme[c] as regards excision. A writer in the *Lancet*[d] states that it is equally true as regards amputation, and Mr. Humphry's paper in the *Medico Chirurgical Transactions* for 1861, explains the reason. He finds that the growth of a long bone takes place at its epiphysial lines, generally, with unequal energy; and that the growth is greater at the end where the epiphysis is last to unite, which is generally the larger end. He finds, also, that the growth of a stump is not usually proportionate to the rest of the body, and is least so, when the more quickly growing end of the bone has been removed.

Yet we cannot accept as sufficiently conclusive the statements of Messrs. Humphry, Price, and Butcher, that, by confining our resection to a portion of the epiphysis, we shall not interfere with the growth of the limb. For Mr. Syme's experience disproves the statement.

Again, it is impossible to know beforehand how much bone may have to be removed. When a thin slice is cut off, another and another may be found necessary, until it is cut far beyond the epiphysial junction.

If the statistics we have be full and honest, their result is, that, as regards life, excision is, for all joints, a more favourable operation than amputation ; but it is greatly to be feared that many of the unfavourable cases have not seemed to those who have had them to present sufficient points of interest for publication. For diseases of the ankle, elbow, and shoulder, excision is now confessedly to be preferred to amputation. As to the wrist, knee, and hip, the fullest attainable information is necessary

[a] Barwell, op. cit.  
[c] Pr. of Surgery.  
[b] Br. Med. Jour., 1859.  
[d] Jan. 14, 1854.

for the formation of any decided opinion. Heyfelder,[a] in his admirable and laborious work on resections, gives very full statistical tables on the subject, up to the latest date.

*Wrist.*—The results here are as follows:—Total resection of radius, ulna, and carpal bones, 14 known cases, 1 death, 9 successful results, 3 partially so; of partial resections, 35 known cases, 8 deaths, 26 successful results. The cases of this excision are so few that it is not advisable to make a separate table of those operated on in the past decade. It may, however, be remarked that most of the total resections come within that period.

As regards excision of the wrist joint for caries, there is a tendency to relapse and ultimate failure, which, from the nature of the case, is unavoidable. Both the number of the small joints and the multitude of tendinous sheaths, which must necessarily be opened, predispose to burrowing suppuration. The tendons and their sheaths may be avoided by making the incisions longitudinal, but the operation, in such case, will be troublesome and tedious, and if the disease is extensive, these incisions will not suffice. When such operators as Fergusson, Simon, &c., have to put on record repeated and unsuccessful operations, and when, to come nearer home, Mr. Butcher, who has so distinguished himself as the champion of excision, is obliged to be satisfied with fingers permanently flexed, as the best result of his well-planned operations, it can only be concluded that the operation is of exceptional application, and of more than doubtful result. Where it is not possible to execute it by longitudinal incisions, Mr. Butcher's modification of the transverse incision, by which the muscles of the thumb and their tendons are spared, is of great value, as assisting in retaining a useful amount of motion in the thumb.

*Knee.*—Of total resections of the knee, 183 cases are collected by Heyfelder, from Filkin's first case, in 1762, to the end of 1859. In the last ten years there have been 146 known cases, 37 deaths, 17 secondary amputations (of which number all but one recovered).

The results as regards use of the limb are—

1 with limb bowed at the knee.

1 fibrous union only.

4 condition unknown.

10 still under treatment, progressing favourably.

76 result given as good in various degree.

Pyæmia and tuberculosis were the chief causes of death.

The results, then, are 1 death in 4, or 25 per cent.

From these numbers let us now deduct all who were operated on under the age of 15.

There were 38 such cases, the particulars of which were more or less known.

[a] Operationslehre und Statistik der Resectionen. Von Dr. Oskar Heyfelder. Vienna, 1861. Reviewed in the last number of the Journal.

Five of these died, and four were subjected to amputation. In one instance an infant of two years of age was subjected to this operation! it died.

Comparing the statistics of the operation during the past ten years with those of the previous period, from 1762 to 1851, there appears a decrease of 50 per cent. in the rate of mortality. One-half of those operated on died in the early period. Jones' operation in 1851 marks a new era. Heyfelder's tables are not absolutely complete, but they are the best available at present, and probably give as true an account as can be expected from statistics.

There are a few cases of partial resection of the knee joint, but they present no material feature. As regards the mode of operation, Mr. Butcher's papers on the subject in this Journal, leave little to be added. He prefers the H incision, and now recommends the removal of the patella. Hutchinson suggests to divide the ham-string muscles, in order to check the forward tendency of the femur. Few cases will require this, as, by attention to Mr. Butcher's suggestions, especially the adaptation of an anterior splint, this source of annoyance will be obviated. Another suggestion of Mr. Hutchinson's may deserve more consideration, namely, the making of a button-hole opening in the ham, in order to prevent lodgment of pus in the deeper parts of the wound. This gravitation of matter is a fertile source of disappointment—infiltration of the areolar tissue and diffused abscess, with destruction of the periosteum and extension of the osteitis—consequences which such an opening might help to prevent.

As to the selection of cases for excision, where operation is indicated, it has already been said that free incisions are the rule for acute suppurative destruction of the joints. Coulson denies the frequency of strumous disease of joints; if this be true, much more may be done by patience on all hands to avoid operation than has hitherto been effected, especially in children. No joint should be excised when there is reason to suspect purulent infiltration of the cancellated tissue of the bone to any extent. These cases are characterized by tenderness along the bone, by the ramification of blue veins over the joint, by a transparency and glossiness of the skin in the same situation; by gnawing pains, and a sensation sometimes as if the bone would break; by great want of power to use or bear upon the limb, and by a comparative absence or rarity of sinuses. Such cases are much better suited for amputation than excision, and unfortunately they are of frequent occurrence.

The model case for excision is the white swelling, which will not anchylose, or which, from receiving a hurt, is running on to a suppurative condition and threatening the life of the patient. There is a condition more frequently found in the wrist and elbow than in the larger joints, viz., where the disease is limited by a cup of plastic material, that

becomes ossified and imparts a sensation of increased thickness and hardness, without tenderness; this condition, in the vast majority of cases, will surely get well by anchylosis, partial or complete; but occasionally the patient's strength threatens to give way, and excision may be called for; it is a rare case, but the most promising for the operation. Few museums are without old specimens of bones amputated for such a condition of things.

To sum up in the words of Mr. Barwell—words which, though bearing evidence of very hasty composition, inculcate sound practice,—"The operation must be considered as still *sub judice*. It has zealous advocacy, and bitter antagonism. At the present time the balance of evidence seems rather in its favour, but we have not all the evidence. It cannot be said either that preference should be given to excision or to amputation; but, it may be observed, that the choice of cases for excision of the knee, should be very carefully made, and that it is not an operation which can be practised in an equal number of diseases of that joint, as resection of the elbow or shoulder, in maladies of those articulations."

*Hip joint and head of femur.*— As regards excision of the hip joint and resection of the head of the femur, the most complete statistics are to be obtained by a comparison of Heyfelder the younger's monograph, and a paper by Fock, in *Langenbeck's Archives*. By collating their tables for the years 1851—60, inclusive, the following results are arrived at.

Seven cases were operated on for gunshot wounds, of which but one recovered;[a] but seeing that amputation for gunshot wounds of the hip joint may be said to be invariably fatal (but one exception is on record), and that all patients who are not subjected to operation also die, this ratio of success is sufficient to justify the adoption of excision in such cases.

Omitting cases of which we have no recorded result as to the life of the patient, it appears that in 68 instances excision of the hip joint has been performed for disease, during the decade. Twenty-seven of these patients died in periods varying from a few hours to 18 months after operation; one died of phthisis after three years. Of the remaining 40, 26 have limbs of varying degrees of usefulness, five are still on crutches, two are still unhealed, and of seven, the result, as regards the limb, is not known.

These results are not cheering, but they are quite sufficient to induce us to operate, if death seems otherwise certain, and that the circumstances of the case hold out any prospect of success. Resection of the head of the femur stands on a different footing from other resections in the extremities, inasmuch as we have no practical choice between it and amputation. The latter is not applicable for disease of this joint, and has been

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[a] This case was operated on by Surgeon O'Leary in the Crimea; Staff Assistant-Surgeon F. O'Dell, who was present and assisted at the operation, states that this man subsequently had a very useful limb.

invariably fatal when attempted. Indeed no modern surgeon is likely to risk his reputation by repeating the operation : hence, we are justified in resorting to resection, if we have any reasonable probability of success. Mr. Hancock[a] has shown that the more formidable operation of excision of the entire joint, is capable of a favourable issue, at least for a time. In three of the successful cases given in the tables of Fock and Heyfelder, perforation of the acetabulum and intra-pelvic abscess are mentioned as complications.

*Ankle.*—Excision of the ankle joint is satisfactory in its results. In the hands of Mr. Hancock, the deaths have been not greater than one in four, and the limbs have been very useful, even in patients who have to earn their bread. In Heyfelder's tables but two deaths are noted in 22 cases, and two secondary amputations; nearly all the cases are reported as useful joints with motion, but two being anchylosed. Excision of the os calcis and of the astragalus may also be looked upon as proved and found useful in suitable cases. Nature supplies a large amount of firm fibrous tissue in the room of these cancellated bones, and in the case of the os calcis, a high heel of cork or wire-spring supplies any remaining deficiency. In our present number we have an interesting account of two new cases of resection of the astragalus by Dr. Heyfelder.

*Scapula.*—Complete resection of the scapula has been done four times, by Langenbeck, Syme, Heyfelder, sen., and Jones. The cases of the first three died, the other convalesced; of partial amputations, to any extent, seven out of 15 died.

*Maxillary bones.*—Heyfelder, sen., has four times removed both superior maxillary bones. Three of these are detailed in our 23rd volume, the fourth in his son's monograph.

The first, a case of cancer, survived the operation 15 months, dying of a return of the disease.

The second, a similar case, died in rather less than two years after the operation, of a return of the cancer.

The third had survived 14 months without any sign of return of disease at the last account. This operation was done for what we should call a lupoid ulceration, but there is no proper description of the nature of the morbid mass.

The fourth case died 40 hours after the operation, having disease of lungs, liver, and kidneys. Other operators have performed the formidable feat of removing these bones,—Dieffenbach, Maisonneuve, twice, Dietz, Jüngken, and Langenbeck.

Four cases out of 10 may be considered successful; in one the result is not known.

*Direct Injury.*—Excision is of great value in cases of direct injury. It

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[a] Lancet, 1857–8.

is well known that the rate of death, after amputation, is high in such cases, and especially in gunshot wounds; the results of the Crimean campaign are generally in favour of the attempt to save the limb by excision of the shattered joint where practicable; the mortality is high, but not higher than that of amputation. Guthrie long since laid down the rule—in gunshot wounds of the head of the humerus and of the elbow joint—to save the limb by excision, even if a large piece of the shaft has to be removed in the former case; and this is perfectly in accordance with the results of more recent experience. An excellent example of the application of this operation in a case of compound fracture of the elbow joint, lately occurred in the practice of Mr. G. H. Porter; the limb was not only preserved, but was eminently useful for the purposes of the man's trade as a painter.[a]

*Anchylosed Joints.*—The question of forced rupture of anchylosis, raised by Stromeyer, Louvrier, Dieffenbach, and Langenbeck, is considered by Holmes Coote,[b] Barwell,[c] Brodhurst,[d] Tamplin,[e] Hingston,[f] Frank,[g] and others.

It will be remembered that Stromeyer advocated gradual extension, or flexion, after subcutaneous tenotomy, that Louvrier and Dieffenbach forcibly and suddenly ruptured the anchylosis, and that Langenbeck followed in their steps, discarding, perhaps, the extreme violence which led to rupture of vessels and nerves, and to fatal injury to limb and life in the hands of Louvrier. Langenbeck uses considerable force, under chloroform, but does not insist on completely restoring the mobility of the joint at the first séance. The result of his practice, according to Mr. Frank of Manchester, has been so eminently successful, that, out of 150 cases, he has only lost one, and that by what he terms central necrosis, extending through the epiphysis, and communicating with the joint.

Mr. Brodhurst seems to break up the adhesion by a succession of slight jerks—a plan admirably adapted for getting rid of fibrous bands of small size, which not unfrequently form the sole obstacle to moderate use of the joint. He replaces the limb in its position of anchylosis for a few days, until inflammatory reaction subsides.

Mr. Barwell urges the propriety of early passive motion during the process of cure, so as to prevent fixity.

The subcutaneous section of tendon and muscle, even to a considerable extent, is advocated by the same writer.

[a] Dublin Quarterly Journal, Vol. xxx.
[b] British Medical Journal, September, 1858.
[c] Op. Cit.
[d] Medico-Chirurgical Transactions, Vol. xl.
[e] On Deformities, Medical Times and Gazette, 1858.
[f] Glasgow Medical Journal, July, 1853.
[g] Medical Times and Gazette, August and November, 1853.

### AMPUTATIONS.

*Mode of Operating.*—On the subject of amputations, we have a principle laid down by Mr. Lane, in the new edition of *Cooper's Surgical Dictionary*, which is to guide us in the selection of the flap or the circular method. Slightly modified it stands thus.   When amputation is required for accident in a limb not gorged by inflammatory exudations, the circular method is to be preferred; but when the plastic effusions of recent or chronic inflammations have glued the skin and muscles into a firm and unretracting mass, the double flap will be found both easier of execution and more satisfactory in its results.   Of Teale's rectangular flap we have, as yet, too limited experience; it would appear to be best suited, in cases of the former class, where lacerations from machinery or other causes interfere with the circular method.

*Amputations through the Condyles.*—These begin to be looked upon with disfavour, notwithstanding the approval of them by Syme and Ferguson. The cancellated osseous tissue abounds so with veins, that phlebitis of a dangerous character too frequently results from it.   Probably amputations at the joints, or in the contiguity, as the French term it, will succeed them, and deservedly so, in suitable cases.   The cases which demand amputation at the joint are, however, but rare, and will be limited, as a rule, to the upper classes, as the stumps obtained from amputation in the continuity are much more serviceable to those who have to earn their bread.

*Section through the Joint*—Has been recommended by Haynes Walton,[a] and he gives a judicious warning against meddling needlessly with the articular cartilages.

In the amputation above the carpus, such removal is bad surgery, as it is followed by loss of pronation and supination in the stump, and great injury to the utility of an artificial member.   The presence of the cartilages does not interfere with rapidity of union; for they are cast off in shreds during the suppurative process, and, even in large joints they will disappear in a very few days.

Dr. Markoe[b] of New York supplies us with statistics on this operation. The proportion of deaths, according to him, is 37 per cent. for amputation at the knee joint, and $43\frac{1}{2}$ for amputation in the thigh.   The value of such statistics *en masse* is more than doubtful.   There are many things to be taken into consideration in the individual case, that can only have light thrown on them by similar circumstances in other cases, and besides, the statistics of one man differ materially from those of another.

Mr. Bryant has given a most painstaking table in the *Lancet* of March 12, 1859, containing much valuable information on the subject of the causes of death after amputation.

[a] Lancet, November, 1859.
[b] New York Journal of Medicine, 1856.

*Amputation in the Child* is contra-indicated below the knee, for reasons of *convenance*. In such cases the limb ceases to grow at the same rate as the other, and the patient, when grown up, presents the disagreeable spectacle of having his two knees on different levels.

*Amputation of the Ankle.*—Pirogoff's modification of Syme's amputation at the ankle joint is a valuable addition to our resources; and to Pirrie or Eben Watson[a] we are further indebted for an improvement in the mode of its execution. This modification consists in first directly dividing the soft parts down to the bone, by an incision from the tip of one malleolus to the other, under the heel; secondly, sawing the os calcis in an upward and backward direction; thirdly, completing the posterior flap; fourthly, making an incision in front of the joint, from one malleolus to the other; and finally, sawing off the malleoli. If the os calcis should prove at all carious its remains can be removed on the moment, as converting the operation into an improved and rapidly executed Syme's; but where the bone is sound it has been found to unite to the tibia with wonderful rapidity. In this operation, as elsewhere, caution in selection of cases is required.

All new operations have first to run the gauntlet of injudicious support, and afterwards of almost equally injudicious neglect. This oscillation of professional favour will be in proportion to their importance and magnitude. In the case under consideration it is stated that Pirogoff himself has abandoned the operation; its success in the hands of others demands, a reconsideration of this verdict. Mr. Syme gives it a determined opposition :—

" The only other alteration worthy of notice is that of Professor Pirogoff, of St. Petersburgh, who proposed to retain the tuberosity of the os calcis by sawing it off before the disarticulation was completed, and thus, so far as possible, depriving the operation of all its advantages ; in the first place, by rendering it complicated instead of extremely simple; secondly, by making the stump too long; thirdly, by impairing its constitution; fourthly, by retaining a portion of the osseous tissue justly liable to the suspicion of relapse; and fifthly, by not being applicable to all cases requiring amputation at the ankle. On these grounds I have been accustomed to regard the adoption of this modification as a certain sign of lax surgical principle."[b]

It would have been more satisfactory had the energetic Professor of the Northern Athens supplied us with some of his reasons for coming to the above five conclusions.

### HERNIA.

Few subjects give greater proof of the desire of surgeons to improve their art, than hernia. These efforts take three distinct directions—

[a] Lancet, June, 1859.  Pirrie's Surgery.
[b] Observations in Clinical Surgery, p. 47.  Reviewed in our present Number.

1. The radical cure of hernia.
2. The reduction of hernia.
3. Improvements in the mode of operation for strangulated hernia.

*Operations for the radical cure.*—Wützer's operation for the cure of reducible inguinal hernia dates back to 1838, but was scarcely known, and not practised in this country until introduced to our notice by Mr. Spencer Wells.[a] It appears to be extremely successful in the hands of the Bonn professor, of Sigmund of Vienna, and of Rothmund of Munich. The last-named had operated on over 1,000 cases up to the year 1858, without a single death. This speaks strongly for the safety of the operation—of its efficiency, accounts are dubious, at least cases are not sufficiently long under observation, except occasionally, for us to judge of the permanency of success. Mr. Wells' paper in this Journal[b] is so ample, that we need only give the briefest description of the operation, which, indeed, is now well known. The instrument consists of a central plug, with two side pieces, which are capable of being detached, in order to change them for larger or smaller pieces, according to the size of the ring; through the long diameter of this plug (which is a flattened cylinder), one, two, or three curved needles can be passed, which make their exit near the extremity on its upper surface; this plug is thrust up into the ring, invaginating some of the integument of the scrotum, the needles are then inserted through the doubled skin and the sac, an external slightly concave plate is now screwed down, so as to compress the abdominal wall and invaginated skin and sac together, with any degree of force that may seem safe or advisable. The apparatus is left in situ from six to ten days, and then cautiously removed; the patient remains horizontal until the needle punctures are healed, and wears a weak truss with a large soft pad, for three months, in order to support the recent adhesions, and prevent the retraction of the invaginated skin. Mr. Wells claims that in strong patients, up to 40 or 45 years of age, when the hernia is of moderate size, a perfect cure may be expected, and that in large herniæ, which a truss will not keep up, such reduction in the size of the ring is obtained as to enable a truss to act efficiently. In our present number there is an ingenious modification of Wützer's instrument by Redfern Davies; he found that the gut was apt to slip down behind the plug of skin, owing to an aperture of small size remaining unclosed in the upper part of the canal. To obviate this, he makes his cylindrical plug in two portions, connected at their outer extremities by a hinge, and capable of being separated at their point by a screw and lever. Where Wützer's operation is adopted, this modification of his instrument deserves attention.

Wood's operation has almost supplanted Wützer's. It has the advan-

[a] Medico-Chirurgical Transactions, 1854.
[b] Dublin Quarterly Journal, 1858.

tage of not stretching the canal and ring as Wützer's instrument must do. It is a modification of the old royal stitch; its principle is to pass one end of the thread into the canal and out through the skin under one pillar of the outer ring; the other end of the thread is passed up in like manner under the inner pillar, and out through the same opening in the skin. Previous to passing the threads, a dissection of a portion of the superficial fascia and fascia propria has been made through a small opening in the upper part of the scrotum, and as much of these as possible is invaginated when the loop of the thread is drawn up. The ends of the thread are either tied over a piece of round box wood, or simply drawn tight without any intervening material.

Roubaix devised an autoplastic operation, by means of which a triangular piece of skin was made to close the opening of the sac.[a]

R. Davies has applied his modification of Wützer's operation to femoral and ventral hernia with success.

Lee has used a simple stitch like Woods', only that he brought out the ends of the ligature at different openings in the skin, and included a bridge of skin in the knot, the ligature was allowed to slough out.

Syme used a rectal bougie in place of Wützer's expensive apparatus, passing his ligature through a hole in the end of the bougie. Other minor modifications of these operative measures have been suggested by many surgeons—their very number indicating that the operation is a disappointing one. Certainly it presents no feature to recommend it in preference to the admirable truss long since invented by Mr. L'Estrange.

None of these operations act upon the internal ring, and none of them effectually upon the upper part of the canal. All of them are applicable to those hernia only which have descended beyond the external ring. Now, Mr. L'Estrange's truss exercises pressure on the entire canal and the internal ring. It is applicable to true inguinal hernia, as well as to scrotal, and if the patient will confine himself to the horizontal posture, as long as is needed after Wützer or Wood's operation, and will afterwards wear the truss for a few months, he will be cured much more certainly and permanently than by any of the other means.

Sir Astley Cooper long since laid down the principle that all trusses must fail to cure hernia, unless they compress the canal and internal ring. Mr. L'Estrange's truss fulfils the necessary indications. It makes its principal pressure on the internal ring and neck of the sac, and the force of the pressure lessens as we pass down the canal to the external ring. By this constant pressure, an escape of intestine from the abdominal cavity is completely prevented, adhesive inflammation is set up between the opposed surfaces of the sac, and a permanent cure effected. If the patient will lie for ten days or a fortnight after the application of the

[a] Gaz. Med. de Paris, December, 1855.

truss, Mr. L'Estrange asserts, the cure will be almost certain. Even without that precaution many patients have, by its use, been cured, not only of small recent hernia, but of hernia of large size and old standing.

This truss is now used extensively both in the army and navy, and has had testimony borne to its efficiency, as a truss and as a means of cure, by the most distinguished surgeons of the day. Omitting the names of Irish surgeons who might be supposed to be prejudiced, it will suffice to say, that Ferguson, Liston, Syme, Miller, among civil surgeons, and Alexander, Bell, Carter, and Gibson, among military and naval, have given it their approval; that cases of radical cure by its use are recorded under the hands of the most distinguished medical officers of both services; and that the Academy of Medicine of St. Petersburgh has signified to Mr. L'Estrange its approval of the principle on which it is constructed. Seeing we possess such efficient and bloodless means of cure, our English and German friends must forgive our apparent neglect of their ingenious operations.

M. Bourjeaurd[a] has devised a combination of elastic bandage and air pad, which appears to be a comfortable kind of truss, but not efficient for the radical cure.

Of injection of iodine into the sac (Velpeau, Jobert, Pancoast), or subcutaneous scarification of the neck of the sac, nothing need be said. They have almost passed into oblivion as means of effecting a radical cure.

2. *Modes of facilitating the reduction of hernia.*

Malgaigne, Bransby Cooper, and Hilton,[b] succeeded in reducing apparently irreducible hernia, by a prolonged use of ice to the tumour, gentle laxative medicines (magnesia with colchicum), and sometimes the full administration of opium, with dry diet and the recumbent posture, or shoulders slightly raised.

In cases of strangulated hernia, Baudens[c] recommends ice to the tumour, with compression, where it can be borne, and elevation of the pelvis. Dr. Andrew Buchanan, of Glasgow,[d] suggests prolonged and forced expiration, so as to use traction on the intestine by means of the upward action of the diaphragm.

Other means of making traction on the intestine from the direction of the abdomen, are depression of the shoulders and elevation of the hips,[e] to which may be added the application of a jack towel or roller round the abdomen,[f] the ends of which are pulled upwards, so as to drag up the intestines.

[a] Lancet, Jan. 10, 1852.
[b] Medical Times and Gazette, May 28, 1853.
[c] Gazette des Hôpitaux, August, 1854.
[d] Glasgow Medical Journal, July, 1856.
[e] An old method revived by Drs. Jessop of Cheltenham and H. Power.
[f] Wise, H.E.I.C.—Braithwaite, Vol. xxi.

In the Meath Hospital success in reducing a hernia is frequently attained by the use of a large cupping glass applied to the surface of the abdomen, close to the ring. This acts by dragging the intestine away from the sac, and by emptying the constructed portion of its gaseous contents. For this very useful suggestion we are indebted to the respected apothecary, Mr. Parr. Strong and hot coffee, given in cupfuls every quarter of an hour, without milk and with very little sugar, seems also to have a wonderful power over the spasm of the intestine, and has succeeded in the hands of several practitioners in procuring reduction of obstinately strangulated hernia.[a]

3. *Operations for reduction of strangulated hernia.*

Baron Seutin of Brussels inserts his little finger gently along the hernia, until he gets it within the ring; he then hooks his finger and tears the ring forcibly. By this means he has often succeeded in avoiding a cutting operation.

For femoral hernia Mr. Gay's minute incision at the inside of the neck of the sac, immediately over Gimbernat's ligament, gains gradual favour. It has the advantage of enabling the operator to divide the stricture almost subcutaneously, by an insignificant wound, without, in the majority of cases, opening the sac. By means of it the mortality of hernia is reduced 50 per cent. Messrs. Fergusson, Luke, Paget, Birkett, and many others, fully approve of it, and in a few years it will, it is to be hoped, be the rule.

The objection that at times the intestine and sac may be returned *en masse*, holds equally to the taxis. This accident occurs because men forget that taxis is not, or ought not to be, at first a force exercised to push the intestine back into the abdomen, but rather a gentle and even compression of the tumour, by which it is sought to empty the intestine first of its gaseous, then of its feculent contents, before attempting to return it. Let the taxis be used properly, and very seldom indeed will the reduction *en bloc* be met with.

The extra peritoneal operation is also applicable in some cases of inguinal hernia, especially the more direct forms; and there is no reason why the effort should not be made to reduce the intestine by means of it, before resorting to an opening into the serous sac—always having due regard to the mode in which the taxis should be applied. The whole question of extra peritoneal operations for hernia was discussed, at length, in the last number of this Journal.[b]

Valuable statistics and conclusions on hernia will be found in a paper by Mr. Bryant, in *Guy's Hospital Reports* for 1856.

<center>(<em>To be concluded in our next.</em>)</center>

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[a] Durand of Havannah, Sammut of Malta—Braithwaite, Vol. xxxvi., xxxvii.
[b] On Hernia, by Mr. M. H. Collis, Vol. xxxiii., p. 293.

## TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.[a]

### SESSION 1861–62.

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### FIRST MEETING, NOVEMBER 20, 1861.

DR. CHURCHILL, Vice-President, took the Chair, and opened the Session with some appropriate introductory remarks congratulatory as to the continued prosperity of the Association.

DR. CORRIGAN exhibited, and gave the medical history of, two substances which he had lately found used in the Isle of Salamis, and which were said to be a cure for hydrophobia. One, the *Mylabris Græca*, a fly, found in the island, and which, when pulverised, is given with the powder of the other, a plant—the *cynanchum erectum*—in the proportion of two parts of the plant to one of the fly, every second or third morning from the time the patient was first bitten. The monks of Salamis asserted that the fly was the same that was used for blistering by Hippocrates. The symptoms produced by a large dose of it are, it would appear, similar to those produced by powdered cantharides. Dr. C. was not quite satisfied that this remedy deserved all the praise it received in Salamis, where it was said to be an infallible cure, or probably, more correctly, a prophylactic. He thought, however, that it was well worthy the attention of the profession in this country.

DR. CORRIGAN also mentioned another peculiarity in the treatment, in Greece, of persons bitten by rabid dogs, viz., the cauterization of the part with boiling oil. He considered that this was, perhaps, a far more effectual mode of so doing than the ordinary method adopted in this country; as it solidified all the surrounding tissues, converting them into a dense mass, and arresting absorption.

DR. CHURCHILL read the following paper:—

*On Some of the Reflex Irritations resulting from Uterine Disease.*—I have no doubt, he said, that many of the members of the society are as familiar with the reflex irritations to which I propose to call your attention as I am; and not unlikely some may not only know more, but may be able to throw light upon the best mode of treatment. That they have received

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[a] These reports are supplied by Dr. B. G. Guinness, Secretary to the Association.

less notice in books than they deserve I am certain, and that they are liable to be mistaken for other diseases I know.

I shall not weary your patience by attempting to exhaust the subject, but shall confine myself to a few instances, and those strictly limited to cases for which I can answer, as having come under my own observation.

But it may simplify the matter if I first describe the disease which is most frequently the origin or starting point of those reflex irritations.

In patients subject to attacks of menorrhagia, especially in women who have borne children; or after one or more miscarriages from which recovery has been incomplete; or when both these circumstances concur; if we make an examination by the finger what we are almost certain to find is an enlarged state of the body and cervix uteri, with increased weight, some depression, and a patulous state of the os uteri. There will probably also be more or less tenderness, and a moist condition of the vagina. If we examine with the speculum we may find, in addition, that the mucous membrane of the upper part of the vagina is of a much deeper colour, brighter or darker, as the case may be, than natural; and that there is an excoriation (I protest against applying the term ulceration to this disease) around the os, and extending in different degrees over the cervix. The surface is deprived of epithelium, and looks raw; it may be partly smooth or granular; and but rarely is the mucous membrane entirely destroyed.

I have not intended to sketch a formidable disease, but a very common one; it does not affect life; it never takes on a malignant character, but I do not think it gets well spontaneously; it may last many years; it interferes with important functions, and it gives rise to broken health. If we feel any surprise at this we have only to remember that from 18 or 20 to 45 or 50, the uterus (and ovaries) are the very central organs of female life; that the regular fulfilment of their functions is as essential quite to health as that of the heart, brain, or stomach; and that deviations are more sensibly felt in the case of the uterus than of any other organ; whilst the fulfilment of some of its functions involves special peril to its integrity.

However, I do not propose to describe the general effects of uterine disease upon the constitution, though there is much yet to be said upon that subject also; but rather some of its more local effects.

1. Two years ago a lady, whose mother had recently died of cancer uteri, told me that she was sure that she was getting that disease, in consequence of a permanent sense of heat across the lower belly. A tactile examination enabled me to satisfy the lady that she was not suffering from cancer; but the finger revealed nothing else. A few months ago the lady called upon me and told me that the uncomfortable sense of heat had continued ever since, and that the catamenia had greatly diminished

in quantity. An examination with the speculum revealed an erosion about the size of sixpence, with some congestion of the cervix. I felt some hesitation in attributing her suffering to a cause so apparently trivial; however, I proposed to test its influence by curing it, before trying any other remedy for the heat.

I applied the strong tincture of iodine twice a week, using nothing in addition but vaginal injections of cold water. The erosion soon began to heal; and in exact proportion the sensation of heat diminished until it entirely disappeared.

2. Some years ago I was asked to see a lady who was said to be suffering from rheumatic pains, and also from whites. I found her complaining of a pain apparently in the symphysis pubis, and a much more severe one in the right knee, sometimes extending up towards the hip. Much local treatment had been tried in vain. On examination I found a very large excoriation around the os uteri, with redness of the mucous membrane and swelling of the cervix. I succeeded in curing this by the usual means; and even before she was quite cured the pains disappeared, and did not return.

3. Last year I was consulted by a lady, October 28, who walked into my study with great difficulty, in consequence of a pain along the sciatic nerve, from the hip, and extending sometimes to the foot. She could neither stand nor walk without great pain, and her health was failing for want of exercise and from continual suffering. She had no children; and a little inquiry induced me to think that there was something wrong with the uterus. On examination I found the organ very much retroverted from congestion and enlargement of its fundus; and this, it occurred to me, was probably the cause of the sciatica, either from positive pressure, or, as the source of reflex irritation. I set about curing the enlarged and retroverted condition of the uterus by cold injections, rest, and the application of the tincture of iodine, and in due time the organ regained its normal size and position, and the sciatica had entirely disappeared; the lady being able to stand and walk as usual.

4. Within a few months a lady was sent to me apparently labouring under sciatica, for which everything had been tried. It was painful to stand, and still more to walk; in fact she could not walk more than a very short distance. The pain extended from the left hip down to the knee; always present, even in bed; it increased in paroxysms, and in the upright position. Her health had become impaired from want of exercise, her digestion was deranged, her appetite diminished, and the bowels constipated. She was sent to me because she complained of occasional leucorrhœa, in hopes that, perhaps, some uterine disorder might be detected sufficient to account for the pain in the leg. I examined, and

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found the uterus congested, but not to any great degree; the cervix was red, and there was an excoriation less in size than a shilling. Notwithstanding the similar cases I had seen, I could hardly believe that this condition of the uterus—the congestion and erosion—had caused all the suffering. However, the practical test was easy. I set about curing the uterine affection; and, as I succeeded, there was a progressive diminution of the pain and lameness; and finally it ceased altogether, and the lady can now walk or dance as well as ever, to the great improvement of her general health.

I could give more cases; but these may surely suffice, as I do not wish to trespass too largely on your patience.

I wish now to ask your attention to another form of reflex irritation of perhaps greater interest, because much more frequent, more difficult to manage, and about some points in whose clinical history I am not quite clear. I allude to irritability of the bladder dependent upon some form of uterine disturbance. With the slighter and more evident cases I am sure all are familiar; but the severer cases are not unfrequently treated for disease of the bladder itself without success, so far as I have seen.

Perhaps the most familiar illustration I can give of such cases is the frequent desire to pass water in early pregnancy. Of course this may arise partly from mechanical pressure and partly from reflex irritation after the second month; but I saw a case the other day in which it set in immediately after conception, when it could not have been caused by pressure.

The affection may be characterized either by an increased frequency of passing water without pain or difficulty, or by the addition of pain to the frequency, or by tenesmus, a painful and urgent effort to force out a few drops after the bladder has apparently been emptied.

In the majority of cases nothing is learned from the urine; it is natural in appearance, of the usual specific gravity, not albuminous, nor depositing mucous, and, on analysis, presenting its usual constituents. I have met with one or two remarkable exceptions to this rule, however.

I need not say what a distressing affection this is. Even the minor degrees give trouble enough; but, when severe, the incessant irritation, the frequent pain, and the loss of rest, wear out the patient, and render her pale, languid, and exhausted. The general health soon suffers from the functional disturbance, the appetite becomes fastidious, and the spirits depressed, whilst the fear of some dreadful disease haunts the patient.

Now, I have found this reflex irritation to arise from various conditions of the uterus and vagina. I have known it occasionally in young unmarried women, dependent upon menstrual irregularities, chiefly a scanty secretion; upon acute vaginitis (not gonorrhœal), upon menorrhagia

without erosion, upon congestion, or chronic inflammation and erosion of the cervix. One remark I have made, viz., that the amount of irritability and distress may be very great, and the local lesion very small; or the reverse; in short, that the suffering bears no proportion to the primary disease.

But some one will probably ask, what proof have I that this affection is only a reflex irritation? In the first place (with a few exceptions), the urine preserves its natural composition, even though the irritation has been of long standing; and secondly (with few exceptions), you will cure the vesical affection without direct treatment, which I take to be conclusive.

But now for these exceptions. I have said that the irritability may last for a long time with no change in the character of the urine. I have seen this so after months or even years of suffering. Yet in a few cases of long standing, where there was great tenesmus and pain, I observed a mucous deposit, and even a little blood; in others there was an increase of the phosphates, or a deposit of purpurates.

In the majority of cases I do not think there need be any difficulty in diagnosis, unless the inquiry should be limited to the vesical symptoms. The natural condition of the urine, on the one hand, and some such uterine derangement as I have described, on the other, will at least show the possibility of its being of a reflex nature. An examination with the catheter will ascertain that there is no stone in the bladder, and the relief of the primary affection will be followed by the gradual subsidence of the irritability of the bladder.

But in the severe cases, the diagnosis is not quite so easy. Symptoms almost identical result from calculus in the bladder, and even an experienced hand may not always detect this. Not very long ago I was asked to see a young lady who suffered very much from the necessity of frequent micturition, especially at night, with tenesmus and some pain. It was remarked that whenever the catamenia were irregular, these symptoms appeared, or if present, were aggravated. She had had intervals of complete remission, with relapses at different periods. Although the condition of the urine led me to fear either stone or some disease of the bladder, yet as she had been examined for stone before I saw her, without any being detected, and as there seemed to be some connexion between the irritability of the bladder and menstrual irregularity, I set myself to regulate the latter, in the first place. Under the usual treatment, after some time, she did menstruate, and there was some improvement in the character of the urine, and a diminution of the distress, but it was too slight to satisfy me, and I was allowed to examine the bladder. After some time I succeeded in detecting a stone, which was subsequently removed. Careful examination, I believe, is the only means to be depended upon for diagnosis between these two diseases. I

have seen quite as severe suffering when there was no stone. I recently saw a case with Dr. Macready, where the frequency, the tenesmus, and the pain, were very great, and where sometimes blood and sometimes mucous escaped from the bladder. There was no stone to be discovered, and the irritability was relieved by injections, and by the cure of the erosion.

As to the treatment of the simpler cases, I need not detain you long. But we must be on our guard against promising a *speedy* cure. The erosion or congestion will not be rapidly cured, and the relief of the secondary distress may not commence until the cure of the primary cause is nearly complete. I have a lady under my care at present, who consulted me three or four months ago for reflex irritation of the bladder, and also of the breasts, which nearly resembled those of early pregnancy, arising from congestion and erosion of the cervix.

The latter is now quite well, yet it is only a few weeks that these reflex irritations have ceased to trouble her. I gave no remedies for them.

The first point is, to make sure that there is no stone, by a careful examination, and no organic disease, and then cure the primary affection Each one has his own pet remedy, probably; some use nitrate of silver— some more heroic applications. For myself I have found an occasional touch of nitric acid, and the regular application, twice a week, of strong tincture of iodine, with syringing the vagina daily with cold water, the most effectual remedy. After many years' experience, I must say, that I know of no application to be compared to the iodine ; it not only diminishes the congestion and cures the erosion, but it reduces the bulk of the uterus. If, however, there be any vaginitis, the iodine ought not to be used until that is cured, which will probably be best effected by a solution of nitrate of silver.

If the menstruation be in excess, it must be controlled, as otherwise we shall hardly cure the congestion. I have found that this can be done either by ergot, Indian hemp, gallic acid, or Ruspini's styptic.

In the severer cases, when we have satisfied ourselves that there is no stone, I use the same remedies, local and general, as in the simpler ones, but, in addition, I have found great advantage from throwing into the bladder a solution of nitrate of silver (gr. v. to gr. x.) with a little (gr. ii. to gr. v.), of the extract of Belladonna, or (gr. ii.) watery extract of opium. This should be retained a few minutes and then expelled. It generally gives pain the first time, but less afterwards, and it may be repeated two or three times a week until relief be obtained.

I need hardly say that the state of the constitution and general health should be carefully regulated, if necessary, but in many cases I have found the local treatment all that was required.

Dr. Osborne gave the result of his experience in the use of the *Harrowgate waters.*

He considered that the effect of these waters was very generally mis-understood. They were said to be purgative; but Dr. O. was of opinion that this was not the case. Any effect they had in the way of a laxative was on the small intestines; but the ascending colon would be found plugged. It was necessary to use purgatives whilst taking these waters; for, though the digestive organs were apparently in full vigour, a false diarrhœa was established which could only be relieved by free purgation. He said that the principal spa was, in its constituents, nearly identical with sea water.

The Second Meeting of the Session was held on 18th December—Dr. FITZPATRICK in the chair. The Association adjourned, without trans-acting any business, on account of the recent death of the Prince Consort.

# PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.[a]

## TWENTY FOURTH ANNUAL SESSION—1861-62.

*Ligatured Artery.*—DR. BENNETT exhibited a specimen which showed the changes that occur in the arteries of the thigh after ligature of the super-ficial femoral, for the cure of aneurism in the popliteal space. The man, aged 50, from whom the specimen was taken, died last week in Sir Patrick Dun's Hospital, of disease of the lungs. He had been operated on at Jervis-street Hospital about four years ago, and was discharged cured. At the *post mortem* examination the clinical clerk removed the specimen, but under unfavourable circumstances, which accounts for its not being as perfect as it should be. The common femoral is of its usual size, and presents no change except a slight atheromatous deposit in its coats. The superficial femoral is contracted to less than half its natural diameter, from its origin down to the seat of the ligature, a distance of two and a-half inches. At the seat of the ligature it is completely closed for about half an inch, and from this point down to the origin of the anastomotica magna is again open, and of about the same diameter as the upper patent portion. Beyond the anastomotica magna, the popliteal portion of the vessel is converted into a fibrous cord, as far as the remains of the aneurismal sac, which is about the size of a large filbert, and has undergone calcareous degeneration to such an extent as to require the saw for its division. Below the tumour the vessel is obliterated as far as it has been removed. The profunda femoris, and its branches, are enlarged to nearly double their normal size, as is to be expected in con-

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[a] These reports are furnished by Dr. R. W. Smith, Secretary to the Society.

sequence of their having to carry on the circulation of the limb. The principal points of interest in the specimen are the short extent of the occlusion of the vessel at the seat of ligature, and its patent condition below this point to the origin of the anastomotic branch, which is larger than normal.

The former of these peculiarities is accounted for by the occurrence of two small branches, one immediately above, and the other below the seat of ligature. This peculiarity has been observed in a large number of the reported cases. The latter point of interest, namely, the patent condition of a large part of the vessel below the seat of ligature, and the increased size of the vessel leading into the end of the patent portion, shows that the stream in the anastomotic artery was reversed, and that this vessel must have circulated the blood through the sac for a time after the application of the ligature, and so led to its gradual obliteration. This point shows that the principles of the cure of aneurism, by ligature, and by pressure, are the same—namely, the diminution, not the stoppage of the stream through the sac, so as to favour a gradual deposit of fibrin, and not the coagulation of blood in the sac. This conclusion is borne out by the phenomenon of recurrent pulsation, which occurs in the sac some short time after the operation in most cases, indicating that the collateral circulation has been established.—*November* 30, 1861.

*Cancer.*—Mr. M. H. COLLIS said he was indebted to Mr. Smyly for the opportunity of bringing forward a case of cancer, which presented some peculiarities. Knowing the interest he took in such subjects, he kindly allowed him to be the medium of offering it to the Society. The patient was a woman about 50 years of age, and exceedingly hale and healthy-looking—the mother of two children. About a year and a half ago she met with a hurt, and immediately afterwards observed a small tumour, about the size of a walnut, or rather less, in the breast. It merely gave her mental annoyance until four months ago, when it seemed to grow rapidly; she cannot say whether she received a second injury then; she complained of occasional darting pains, of some severity, but the distress of mind from the presence of the tumour annoyed her more than the pain, and she wished to have the tumour removed. Upon presenting herself at the Meath Hospital, about a week ago, the surface of the tumour appeared to be extremely red, and the skin in the neighbourhood was of an erysipelatous tinge. The skin over the most prominent part of the tumour, though not adherent, was tightly stretched. There was also considerable enlargement of the glands in the axilla. In the neighbourhod of the tumour tubercles of a small size were distributed over the skin, and there were suspicious points of redness scattered about in the region between the two breasts. Her condition was most unfavourable for operation, and it was a question for consideration, whether,

under the circumstances, they would be justified in interfering. They had her earnest wish, however, for the operation to guide them in their decision, and this mainly led Mr. Smyly to operate. She said if it were not removed she would "hack it off herself," as she was determined not to return home with the tumour on her. Sometimes, after removal of tumours in this condition, the skin heals with great rapidity, and, although the disease inevitably springs out afresh, the patient has a considerable interval of ease, and this was a further inducement to yield to her request. As to her chances of permanent benefit from the operation, they were very small. Much evidence could not be derived from statistics on the subject; statistics did not apply to special cases; those, however, collected by Mr. Paget were rather favourable to operation, when it could be done in the early stages of the disease. Mr. Collis here exhibited the section of the tumour, and proceeded to remark, that there were, at least, three remarkable points of interest about the growth. Upon the thinner lower portion of the tumour they found a hard, dense, resisting, semi-cartilaginous material. Where the growth was of rapid development, it became softer—of a grayer colour—much more elastic, and yielding a larger quantity of juice on pressure, or when scraped. Again, where the skin was most tightly stretched, there was a large amount of vascular tissue intermingled with the encephaloid material. They had in this specimen examples of three varieties of cancer— encephaloid, schirrus, and that degree of encephaloid which was about to become fungus hematodes.—*November* 30, 1861.

*General Paralysis of the Insane.*—Dr. BANKS made the following communication, and exhibited the brain and frontal bone.

A man, aged 25 years, was admitted into the Richmond Lunatic Asylum, on the 27th of October, from the Whitworth Hospital, where he had been for three weeks previously, under the care of Dr. Gordon.

His mother stated that he had convulsions in infancy, but, with the exception of that attack, he had enjoyed good health. At the age of 13, being then a remarkably strong boy, he was kicked by a horse in the forehead, and remained in a state of insensibility for 24 hours after the receipt of the injury. In the progress of the case, small pieces of bone came away from the wound, which, however, was perfectly healed at the expiration of two months, leaving a deep depression of a semicircular form on the forehead. He was occasionally noisy and restless, and difficult to be managed; but there was no marked change in his condition until the morning of the 27th of November (one month from his admission), when he was seized with epileptiform convulsions, which recurred at intervals until his death, which took place in 36 hours. He was perfectly unconscious from the moment of the seizure.

The necropsy, performed 24 hours after death, revealed the following

morbid appearances:—On dividing the scalp, it was found to be gorged with blood, and at the situation of the deep depression on the forehead, it was so intimately attached to the frontal bone, that it was with difficulty removed, and the bone itself had a groove, corresponding to the cicatrix, of considerable depth.

On the internal surface of the frontal bone there was also a groove, and to it the dura matter closely adhered. In the neighbourhood of the depression, the bone was extremely thick and dense from the deposition of osseous matter. On the surface of the brain, corresponding to a ridge at the seat of the fracture, there was a well-marked depression, and here the cerebral substance was hard; and in this part, which was probably the remains of a cicatrix, Dr. Bennet, who made an accurate examination, found a little hard mass, which was evidently bone. The consistence of the brain was normal, but there was extreme vascularity of all the contents of the cranium. There was slight opacity of the arachnoid membrane. The spinal chord was not examined.

This case is interesting, from the fact of mental alienation, associated with general paralysis, occuring in a person who, thirteen years previously, had received an injury of the brain. How much the fracture of the frontal bone, and the lesion of the cerebral substance beneath, contributed to the production of the disease, is difficult to determine. For thirteen years, the patient appears to have been in the enjoyment of mental and bodily health.

The course of the disease, which proved fatal, was unusually rapid, (three months.) With respect to the pathology of general paralysis, it may be observed that there is nothing constant. There was no want of intelligence observable in the boy, his capacity appearing to be equal to that of most young people of his age. When he grew up, his habits were irregular; he was intemperate, and he had syphilis more than once. Three months before his admission into the Asylum, he had a fit, which, from the description, must have been epileptic, and after this his family noticed a complete change in his manner; to use his mother's words, he took strange fancies in his head, believing that people were conspiring together to injure him, &c., &c. While in the Whitworth Hospital, he was heavy and stupid, slow in answering questions, and at times incoherent. He presented, on admission, the ordinary symptoms of the general paralysis of the insane; his articulation was very imperfect; there was a tremor of his tongue and upper lip, and he was unsteady in his gait, the muscles having lost the power of co-ordinate action.

Calmeil, after detailing the morbid appearances observed in many cases of this most hopeless form of disease, says the disease arises from "some one modification of the brain, whose nature we have not yet learned to appreciate." Notwithstanding the labours of Baylè, Esquirol, and other distinguished alienists, at home and abroad, in this field of

inquiry, little light has been thrown on the pathology of general paralysis. The conclusion of Dr. Bucknill is probably correct, who believes that "general paralysis is a disease of nutrition, affecting the whole nervous system."

The subject, however, is one which is well worthy the attention of all who are engaged in the investigation of the pathology of mental disease.— November 30, 1861.

*Aneurism of the Abdominal Aorta.*—Professor MACNAMARA said, that, by the kind permission of Professor Stokes, he was enabled to lay before the Society a specimen of aneurism of the abdominal aorta. The man had been sent to Mr. Macnamara some two years ago, suffering from severe pains in the lumbar region, the cause of which was very obscure. At first he (Mr. M.) was inclined to ascribe them to some renal affection, in which supposition he was, to some extent, borne out by the state of the urine, and prescribed some trifling remedies, which, for the time, gave relief, and he lost sight of the patient until the month of August last, when he returned, complaining of the pain being worse than ever, upon which occasion he was taken into the Meath Hospital, under the care of Dr. Hudson. Mr. Macnamara held in his hand the report of the case, and of the *post-mortem* examination, as taken by his friend, Mr. Arthur Wynne Foot, which entered so fully into every particular as to leave him little else to do than read the report, and show the morbid specimen.

John Mullen, aged 54, married, was admitted into the Meath Hospital, under Dr. Hudson, August 19th, 1861, suffering from severe pain in the spine and loins, and stiffness of the back. For these symptoms he could assign no cause; he had never been a day ill in his life, and had not strained himself. It was soon ascertained that he had been very intemperate, and that the larger arteries were diseased. The first attack of pain occurred four years before admission, and was referred to the left kidney. This pain did not remain very long; but for the last two years there has been pain constantly present in the lower part of the spine, in each lumbar region, spreading over the back, and, within the last three or four months, shifting downwards into the left hip joint. This pain was less acute when the bowels were free; and, when it was very severe, his urine was clear, and free from sediment; whereas, when he was in comparative ease, the urine regained its usual turbidity, from deposition of lithates. The decubitus which he found most comfortable was on his back. At an early period of his illness, he lay on his face with relief, but, after admission, could only keep in that position for a few minutes. Standing or sitting were attitudes he was very reluctant to assume.

On the 19th of August, the hand, when applied to the left side of the lower dorsal vertebræ, felt a pulsation outwards, over a space about four

inches long. In this situation there was a fulness, but no distinct tumour. Pressure on this part did not give pain. A murmur was very distinctly heard there whilst he was in the recumbent position, but disappeared on his sitting up. A rough murmur was heard along the whole length of the spine. *The heart's impulse was very violent,* tilting up the lower ribs at each contraction. He is much distressed by this violent action, which is always in proportion to the severity of the pain.

August 23rd.—Murmur and pulsation were evident from the inferior angle of left scapula to the crest of the ilium at same side. By degrees a tumour became evident at the left side of the lower dorsal vertebræ, and, on the 30th of September, there was, in that situation, a large, well-defined prominence, with strong, eccentric pulsation, the seat of burning pain, shooting thence into the epigastrium, and down to the heels. Firm pressure on the abdomen relieved for a time this sensation, but painting the tumour with tincture of aconite was more effectual. The pain was always worst at night. During this time there were evidences of the advent of another tumour on the right side of the spine, opposite the middle dorsal vertebra. Pulsation, fulness, and at last a distinct tumour appeared the second week in October, at the inferior angle of the right scapula. In neither tumour was there any murmur now heard, but the pulsation was most marked. About this time he suffered much from anesthesia in the lumbar regions, and had some attacks of most violent pain, during the continuance of which the expression of his face was an index of the intense agony he suffered, and for the relief of which large doses of opium (sixty minims of the liquor opii sedativus) were all but ineffectual. His greatest relief was afforded by brandy, which alleviated the pain in a wonderful manner, when opium, hyoscyamus, and other sedatives, proved useless. During all this time, the average rate of his pulse was 80 beats in a minute.

November 7th.—A transverse pulsation, connecting the two tumours beneath the spines of the vertebræ, began to be felt, and there were signs of diffusion of the tumour. On the 23rd of November, the left nates and upper part of the thigh were œdematous ; the lower tumour measured eight inches in length, by seven in width ; the upper one five inches long, by four and a half across. His great difficulty was now how to lie without pressing upon either prominence, and a trial of every means to effect this failed in accomplishing its object. He was found dead in his bed at 3 o'clock, a.m., December 2nd, 1861, having expired without a sound.

*Post-mortem* examination, seven hours after death.—Body cold ; surface very much blanched ; muscles in front of chest, thin, soft, wasted ; no fluid in pericardium ; surface of heart, especially right side, loaded with fat ; valves healthy ; organ *not enlarged, but, on the contrary, rather diminished in size ;* muscles of left ventricle soft ; of right, very soft and thin. Aorta, from commencement, full of patches, slightly raised, of light

yellow deposit. Left lung adherent to ribs, nearly everywhere; lobular emphysema in lower lobe. Some fluid in bottom of pleural cavity. In abdomen, about two pints of yellowish fluid; no peritonitis, recent or old. Intestines were empty. Behind the peritoneum the cellular structure was all black, from extravasated blood, as were also the muscular coverings of the tumours. When the chest and abdomen were eviscerated, two tumours came into view, presenting no rupture on their anterior aspect. The body was turned round, and an oval portion cut out, including the vertebræ from the middle dorsal to the fourth lumbar, extending as far outwards as the angles of the ribs. The muscles on the left side of the back were infiltrated with blood, softened, and decayed; mere pressure of the finger was sufficient to break into the sac, when the integument was removed. On slitting up the abdominal aorta along its whole anterior aspect, a rent was seen in its posterior wall, four and a half inches long, opposite the last dorsal and three first lumbar vertebræ, leading into an enormous double cavity on each side of the spinal column; that on the left side being about nine inches long in its greatest diameter; that on the right, four inches—this was fully packed with coagulated blood, whilst the lower portion only of the cavity on the left side was so occupied—the ribs on the left side slightly, and the vertebræ deeply eroded, formed part of the sac, whilst the intervertebral cartilages had suffered but slightly.

Mr. Macnamara then proceeded to draw the attention of the members of the society to this specimen. The tumour on the right side was now more prominent than that on the left, in consequence of the latter having been, to a great extent, exhausted of its contents by the infiltration of the blood into the neighbouring muscular structure which posteriorly formed the wall of the sac, and which was so completely disorganised that he had no doubt that, had the patient lived a few days longer, the slightest motion would have caused its rupture, and the death of the patient from hemorrhage; a form of death, which, as matters now stood, he did not think this patient had undergone. Mr. Macnamara being now inclined to attribute the cause of death to enfeebled cardiac action, and consequent fatal syncope, rather than to hemorrhage, the quantity of blood effused evidently being the result of a slow creeping exudation rather than of a rapid gush, and, although considerable in quantity, still not sufficiently so, *per se*, to be attended with a fatal result. The condition of the heart threw great light on the benefit that the patient experienced during life from the exhibition of stimuli. The *post mortem* examination also disclosed the interesting fact that its violent action during life was not due to hypertrophy of the organ, but *to its position*, superimposed on the sac of the aneurism, which communicated to the heart its own impulse, giving rise to that "jogging" action to which attention had first been drawn by Dr. Hope. The extraordinary size of

the rent through which the blood had become diffused was also a remarkable feature in this interesting case, it being fully, as the members might observe, of the length described by Mr. Foot. The unhealthy condition of the artery itself was worthy of observation, the coats being capable of being torn with the very slightest effort, and thickly studded with atheromatous deposit. The communication between the sacs on either side was in front of the vertebræ, and perfectly open. The vertebræ themselves had undergone considerable destruction, their bodies being deeply eaten into, whilst the intervertebral cartilages exhibited but slight alteration, and that the corroding action was not limited to the vertebræ, an examination of the ribs would prove, those on the left side being sensibly eroded. These were the most remarkable features of this most interesting case of aneurism, which Mr. Macnamara considered worthy of the attention of the society, on account of its great size, the existence of the double tumour, the vast opening in the sac, the greatly diseased state of the vessel, the long duration of the disease, and the great obscurity attending its diagnosis previous to its coming under Dr. Hudson's care.—*December* 7, 1861.

*Cirrhosis of the Liver.*—DR. MacSWINEY exhibited the liver and spleen taken from a man who had been under his care in Jervis-street Hospital. He died about a week ago, and his history might be thus briefly stated. He was forty years of age, and about ten years ago began to feel in failing health, lost appetite and flesh, had frequent sick headaches, and was subject to vomiting. After suffering under these symptoms for some time, he commenced to feel distress in the abdominal region ; which, he became aware, was somewhat swollen. He sought relief in the Richmond Hospital ; had the operation of tapping performed by one of the surgeons of that institution, and came out quite recovered. He did not describe anything indicating an acute attack of peritonitis at this time. He followed his trade of a painter pretty regularly ; but was a person of very intemperate habits. He suffered, from time to time, from derangement of stomach and general ill health. He came to Jervis-street Hospital sixteen days ago, and presented the following symptoms : he had enormous ascites. There was total loss of appetite, and he was very much wasted. His aspect was drowsy, heavy, and vacant, and he was most unwilling to answer questions. He complained of extreme weakness. Although he was not jaundiced, his skin was of an unusually dusky, sallow tint, and the conjunctivæ were yellow. He passed urine in small quantities, it was high coloured, and deposited red lithates copiously. The diagnosis inferentially made, was, that he was suffering from cirrhosis of the liver, and palliative remedies alone were given. A *post mortem* examination was made by one of the most industrious students of the hospital, Mr. O'Dwyer. The liver was small, and the spleen very large. He believed it

was pretty generally held, as the result of experience, by physicians in this country, that *enlargement* of the spleen bore a tolerably regular proportion to the *diminution* of the size of the liver in cirrhosis; the spleen, in fact, seeming to make an effort to perform the duties of which the liver was no longer capable. He knew it was not so held by foreign authorities, nevertheless it was probable the fact was so. The liver, in that case, did not present many, or very well-marked nodules, but there were some portions of it elevated, which there could be, he believed, no doubt, were due to the contraction of the cellular tissue, or so-called capsule of Glisson, which was always met with in the disease. Upon making a section, a number of small, roundish, distinctly granular, dark-grey coloured bodies might be perceived constituting the internal structure of the nodules. These granules were divided from each other by whitish bands of hard, dense tissue. He might mention, that Mr. O'Dwyer had observed, when making the autopsy, a considerable amount of thin filmy membrane which completely matted the intestines together, and could not be easily broken up, an infallible proof of some antecedent peritonitis. The disease was usually found to exist in spirit drinkers, and it did so in the present instance. It occurred to him that it was produced, in the majority of cases, from the direct action of alcohol on the organ—and if this was the case, if it *were* caused by the action of alcohol imbibed in an undiluted state, and passing through the liver more or less undiluted still, it would be in accordance with the opinions of Lallemand, Duroy, and Perrin, as expressed in their recent work, "*Du Role de l'Alcohol,*" that no decomposition or destruction of the spirit ever occurs in the system, but that it is eliminated sooner or later, as the pure alcohol it had been imbibed. That was, as was known, contrary to the opinion of Liebeg, but, of course, he would not enter further into that question now.—*December* 14, 1861.

*Tuberculosis.*—Dr. Moore exhibited part of the viscera taken from a man, aged 32; he was admitted into Mercer's Hospital on the 1st of November, suffering from uncontrollable diarrhœa; he had all the appearance of one labouring under extreme anemia and exhaustion, the result of general tuberculosis, he was œdematous and ascitic; he passed urine in a diminished quantity; there was no evidence of special cardiac or pulmonary disease; the liver was enlarged, and he complained of great pain in the back. On examination the urine was almost solid with albumen. The diarrhœa was partly controlled by treatment; and attention was then directed to remove the ascites, but without any sensible effect. At the end of some weeks he complained of violent pain at the base of the right side of the thorax, this was alleviated, but it left him totally prostrate. He died on Wednesday last. On making an examination of the viscera, the kidneys weighed between seven and seven ounces and a-half, and were slightly enlarged.

Besides this enlargement and increase in weight, the cortical substance was completely anemic, and only a few vessels of a stunted appearance could be seen in it; the cortical substance was much increased in diameter, its surface smooth and covered with an opaque fluid; the pyramids were of a pale red, their base presenting a rugged appearance from the extension of the cortical substance between the tubuli. On the whole, they presented a very good specimen of fatty renal degeneration, as described by Bright.

The liver, which, during life, filled the right half of the abdomen, as far down as the iliac region, weighed five pounds and a half, the right lobe being especially enlarged; it presented a nodulated, uneven, feel to the hand, and on cutting into its substance, yellowish cheesy deposits about the size of a large pea were observable; these masses were much larger than similar deposits usually met with in the lungs, but were isolated, and did not appear to exceed a dozen in number. The liver, in general, was pale and friable; there were no tubercular deposits in the spleen. The mesenteric glands were enlarged, and the intestinal tract generally showed evidences of a chronic inflammatory condition.

On opening the thorax, the heart and pericardium were enveloped in fat, the right lung was adherent to the diaphragm. In the substance of this viscus, there were traces of recent tubercular deposits, and the lower half of the lung generally was engorged; the upper portion of the right and the whole of the left lung seemed free from tubercle; the bronchial and cervical glands were enlarged. This case is interesting as a specimen of hepatic tuberculosis; this viscus not being so frequently the seat of tubercular disease as is usually supposed, and rarely as a primary affection. It must, therefore, be regarded as an evidence of advanced tuberculosis generally.—*December* 14, 1861.

*Osteosarcoma.*—Mr. HAMILTON presented a femur with this disease, and said, that the man from whom the specimen was taken had felt some pain in the lower part of the femur for some months, and there was slight swelling near the knee, but he was not prevented from following his usual pursuit in the engine department of one of the railways. On one occasion, when walking, his foot came against something, and he fell, and broke his thigh. He was seen by Mr. Burke, of Phibsborough, and treated in the usual way for broken femur. At the end of six or seven weeks, it was found that his general health was suffering, and Mr. Hamilton was asked to see him in consultation with Mr. Burke. The man was apparently perfectly healthy; he was about 28 or 30 years of age; but he was much too fat for a person of his time of life. On removing the splint, he found an ununited fracture. The thigh, at that part, was perfectly flexible, and there was, besides, a considerable degree of swelling at the seat of the fracture. There was a solid wall of bone

on the outside, and it appeared not unlike a necrosis, the bony case of which had given way. There was no alteration of the axis of the femur, nor shortening, which was rather peculiar under the circumstances. There was no eversion of the foot. He recommended a starch bandage, and saw no more of him for ten days or a fortnight, when he came to the hospital, and was admitted. The swelling was then very considerable ; the starch bandage was not removed, but the chief attention was now directed to his chest. He suffered from difficulty of breathing, cough, and hemoptysis, and, on examination, there was complete dulness under the left nipple, absence of respiration, and no râle of any kind. After a short time, he grew rapidly worse, and died. The thigh bone presented a very good specimen of malignant disease. It was a case of malignant osteosarcoma. A large oval tumour occupied the lower third of the femur, and extended a short distance from the condyles of the femur. It felt now different to the touch from what it did when he first saw the man. There was now a softness in the feel of it, and a certain degree of elasticity. When a section was made of the tumour, the thigh bone in the centre had disappeared ; the tissue was firm and elastic in one part, and in another it was soft and blood-coloured. The drawing, by Mr. Connolly, exhibited the appearance of the bone on examination, and showed the deep colour of the medullary portion of the tumour. He formerly exhibited a tumour of the same character, but occurring in a different bone—the humerus ; and it was very interesting to compare the two. This man fractured his arm by leaning on his elbow ; but there was scarcely any bony case in that instance.—*December* 14, 1861.

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# PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.[a]

## TWENTY-FOURTH ANNUAL SESSION, 1861–62

### FIRST MEETING, SATURDAY, 23RD NOVEMBER, 1861.

### DR. M'CLINTOCK, in the Chair.

AFTER some prefatory remarks suitable to the occasion, Dr. M'CLINTOCK exhibited to the meeting a number of highly-finished coloured drawings (from the pencil of Mr. Conolly), and preparations, illustrating the pathology and treatment of *Tumours of the Labia, Clitoris, and Vagina*, accompanying each of these with a concise history of the case from which it was taken. The first group exemplified the *non-malignant* tumours of the labia, and contained four cases.

[a] These reports are supplied by Dr. Geo. H. Kidd, Secretary to the Society.

CASE I.— *Fibrous Tumour of Right Labium.* The morbid growth, which equalled in size a large orange, was perfectly globular, and exceedingly dense and close in its structure. At its most dependent part the labium was ulcerated to the extent a dollar would cover. This ulceration involved the entire thickness of the labium covering the tumour, and exposed the surface of the latter. The patient, from whom this labium was removed, was a countrywoman about 40 years of age, and had borne several children. Fifteen years had elapsed since she first perceived any enlargement of the part. She had experienced no annoyance whatever from the tumour, except what simply resulted from its bulk and weight. The enlarged labium retained its connexion with the pelvis by a neck about equal in size to three fingers; this was divided with a bistoury, and the resulting wound healed satisfactorily. The woman was a patient of Dr. Brunker's, of Dundalk, by whom the operation was performed.

CASE II.— *Syphilitic Hypertrophy of Left Nympha.* A young woman, of rather questionable character, was confined in the Lying-in Hospital of a premature child—her first, she said. It was born dead, and far advanced in decomposition. The left nympha was about the size of a large turkey egg, its surface dark coloured, and deeply fissured. This great bulk of the part was owing, in some degree, to œdema, which disappeared soon after delivery, leaving the tumour more dense and rugous, though diminished in size. She had the remains of a leprous eruption on different parts of the body. She would not listen to any proposal for the extirpation of the tumour, which did not seem to cause more than very trifling inconvenience.
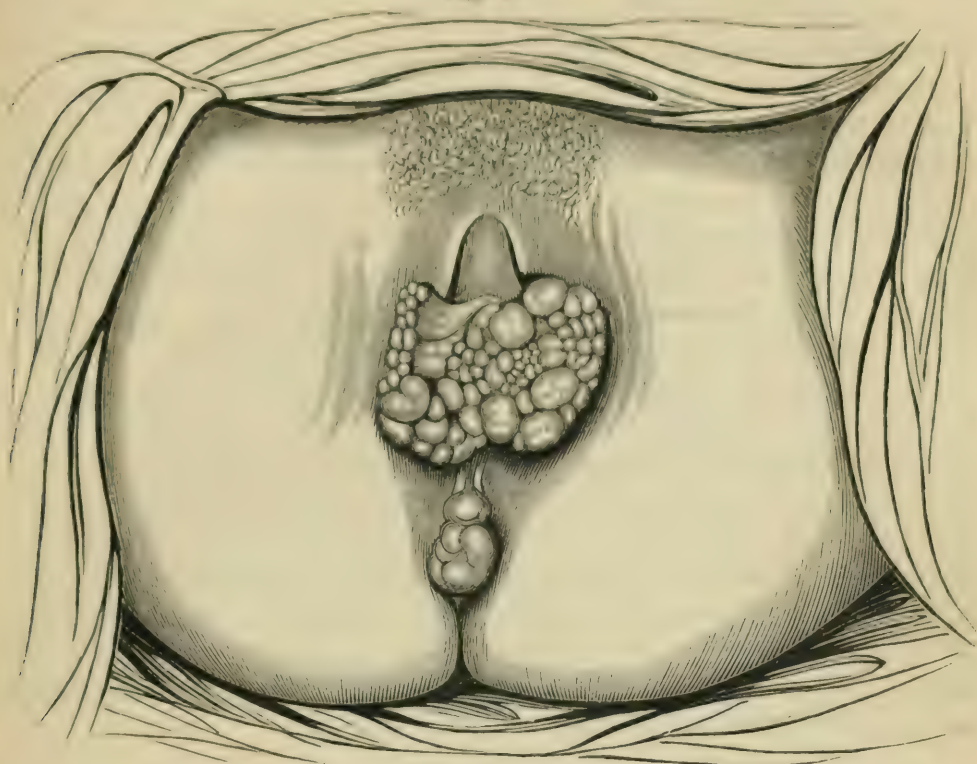
Fig. 1.
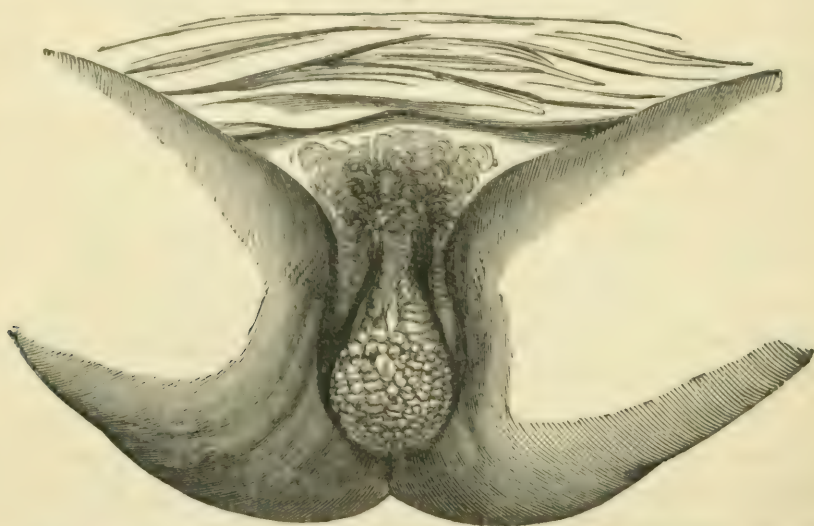


CASE III.— *Tuberculated and Enlarged Nymphæ; Ecrasement.* This woman was aged 35. She was 10 years married, and had one child, nine years ago, which was dead born. She got a venereal complaint from her

husband soon after her marriage. The enlargement of the nymphæ has been coming on for the last six months, and each is now nearly as large

Fig. 2.



as a hen's egg. They are of a pale pink colour, and deeply divided by fissures, so as to present, in a very striking manner, a tuberculated or lobulated appearance. She menstruates regularly, but has a constant yellowish watery discharge from the vulva, with much pain and soreness of the part, so as to render sexual congress quite intolerable for some months back. Having put her under chloroform, Dr. M'C. removed the two nymphæ simultaneously, using two ècraseurs in order to expedite the operation, which altogether occupied 15 minutes. Some hemorrhage from a small artery took place, but was restrained by cold and continuous pressure for the space of two hours. Her recovery was rapid and complete.

CASE IV.—*Enormous Enlargement of Clitoris and Nymphæ; Extirpation.* A countrywoman, aged 30, came under observation in March, 1856, when in the seventh month of her second pregnancy. She sought advice on account of the condition of the labia minora, and was admitted into one of the wards for diseases of women in the Lying-in Hospital. Nine years previously she contracted venereal disease from her husband. About two years ago the nymphæ began to enlarge; and within the last few months they have increased very rapidly. Three large tumours hung down from the genital fissure, of a pinkish red colour, slightly

œdematous, and very tuberculated. The centre tumour was the clitoris, enlarged to the size of a turkey's egg, and bearing some resemblance to a procident uterus. On either side of this were the nymphæ of immense magnitude and of very irregular figure. The fissures and clefts of these growths were abraded, and yielded an abundant yellowish discharge.

As the enlarged clitoris might have interfered with parturition, its removal was deemed advisable, and was effected in the following manner:— A strong silk ligature was applied around its pedicle (which about equalled the thickness of a man's thumb), and three days afterwards it was excised below the line of strangulation. The remains of the pedicle separated some days later, leaving a healthy granulating surface, which healed satisfactorily. The woman was now allowed to go home for her confinement; some weeks after which event she came back to the hospital. The neck of the growths now remaining about equalled the middle, index, and ring fingers. This was divided into three equal portions, each of which was included in a separate ligature applied as tightly as possible. Very considerable pain was thereby occasioned. On the next day the strangulation of the tumours was found not to be complete, and the neck of the growth was again included in two separate ligatures, which caused very acute pain, lasting for many hours. Two days after this the whole mass was removed with the scalpel below the ligatures. One small artery bled, but was easily checked. The remains of the tumour sloughed off in the course of a few days, and the wound healed speedily.

Fig. 3.
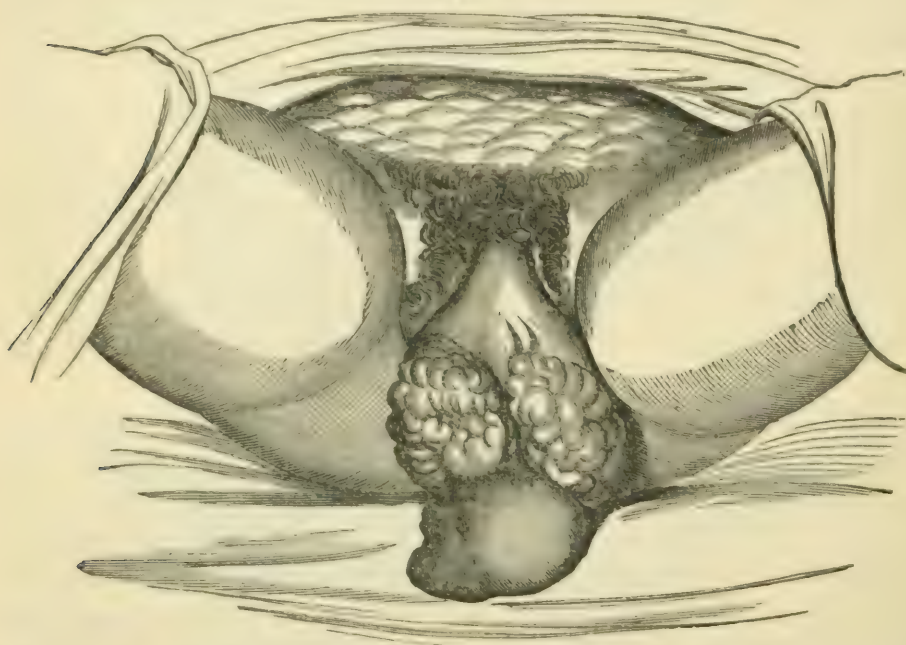


In the last three cases the production of the tumours may, without doubt, be attributed to a syphilitic taint in the system.

Case V.—*Hypertrophy of Nymphæ and Prepuce.* The subject of this case was a young lady, aged 20, of healthy constitution, and menstruating regularly. For some months she observed a gradual enlargement of the labia minora—at times more remarkable—especially after exercise, or at the catamenial epoch. On these occasions she obtained relief by puncturing the tumours with a fine needle, thus giving exit to some watery fluid. The left nympha was enlarged to the size of a Spanish chestnut, and so was the præputium clitoridis; the right nympha was elongated and thickened. All these parts were nearly of the natural colour, of firm texture, and free from pain. The surface was rough, but not fissured or tuberculated. The social position and moral character of this young woman, and the physical condition of the genital organs, all concurred to justify the opinion that she was perfectly chaste, and not addicted to any improper practice. For the space of two months various local and general means were employed, but without the effect of producing any diminution in the size of the tumours. She was then seen, in consultation, by Dr. Stewart (of Lucan), Mr. Cusack, Dr. Denham, and Dr. M'C., all of whom agreed that extirpation was the only mode of cure. Accordingly, on the following day, she was put fully under the influence of chloroform, and Dr. M'C. removed the diseased parts with the écraseur, by two operations. She was placed on her back, and she struggled a good deal during the operations, which both lasted 45 minutes. When she had recovered from the influence of the chloroform she complained of very severe pain in the vulva. This continued for some hours. The healing of the wound was very tedious; but the result of the operation was highly satisfactory; and she continues well to the present time, and without any reappearance of the disease.

In this case the appearance of the tumour differed in one respect from that of the three previous ones, namely, that, whereas it was only rough on the surface, they were deeply fissured and tuberculated. Dr. M'C. suggested that perhaps this difference might serve as a diagnostic mark between syphilitic and other tumours of the nymphæ, as there was no shadow of ground for suspecting any syphilitic taint in this patient, whilst there was clear evidence of the other three women having had constitutional syphilis.

Cases of Malignant Disease of the External Genitals formed the next group brought before the meeting.

Case VI.—A. F., aged 51, had seven children, but, when admitted to the chronic ward of the Lying-in Hospital, was a widow for 12 years. Menstruation had ceased for two years; and some months before her admission into hospital she had noticed a hard kernel in one nympha, and had frequent pruritus of the part. This tumour had gradually enlarged

and ulcerated, involving adjacent parts. The seat of this ulceration was extremely hard, and patches of the surface had a black melanotic colour, which is a rare accompaniment of hard cancer. Occasionally some bloody discharge occurred, and severe darting pain was at times experienced. The vagina and uterus were ascertained to be healthy. Indurated and enlarged glands existed in each inguinal region. The chloride of zinc, and the dried sulphate of zinc were at different times applied to the diseased part, and the former caused a considerable slough to be thrown off. A vast amount of pain, and no benefit, resulted from these applications.

CASE VII.—Was a woman, aged 66, who for 18 months was annoyed with pruritus of the pudenda ; then a tumour made its appearance ; six months after which she came under the care of Dr. M'C. The clitoris was greatly enlarged, indurated, and partially ulcerated. The swelling extended around the right side of the ostium vaginæ, forming a livid coloured tumour in this situation. Though attended with some difficulty, yet a careful digital examination of the uterus was made, and it presented no sign of disease. The case was apparently one of cancer of the pudendum, and in too advanced a stage to think of any operation being undertaken. The accompanying cut (Fig. 4) gives as good an idea of the morbid appearances as can be conveyed without the aid of colours.

Fig. 4.
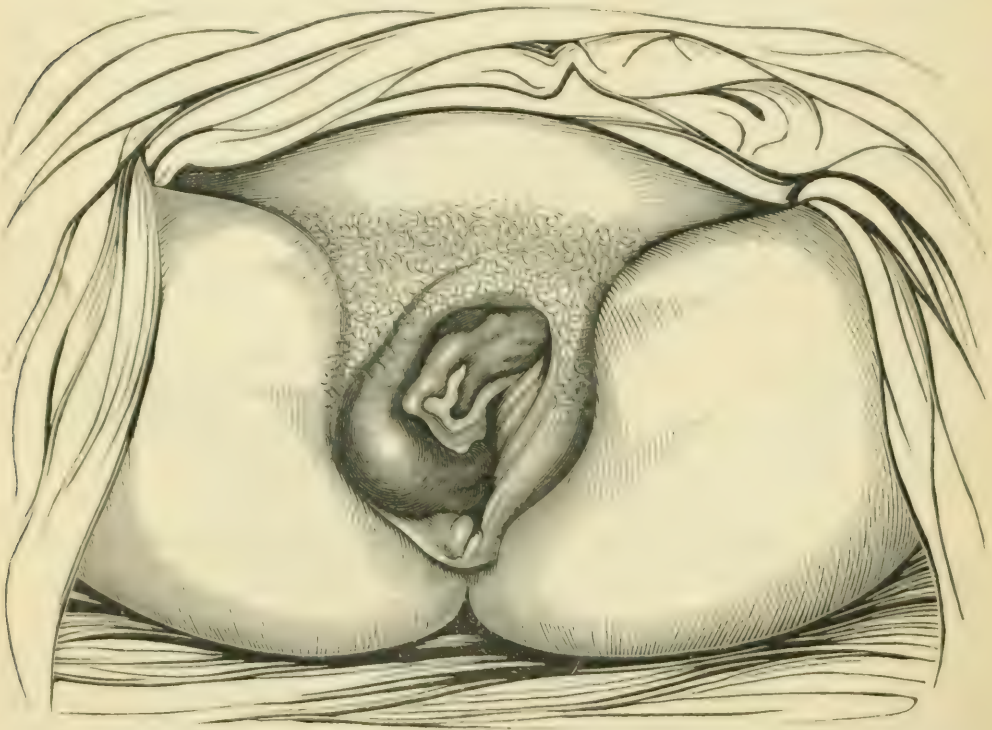


CASE VIII.—Was a woman, aged 67 years, the mother of 10 children. The entire perineum, mons veneris, and right labium presented one con-

tinuous surface of ulcerated epithelial cancer. Tubercles of the same disease had formed in each groin, and were beginning to ulcerate. She stated that the complaint had appeared about a year previously, and that it was not attended with much pain at any period. She had a sensation of heat in the affected parts, and occasional difficulty in micturition, A few slight attacks of hemorrhage had taken place. The disease had begun in the right groin, and thence extended to right labium. The vagina and uterus were found to be free from every tangible sign of the disease. This woman survived for 12 months longer. The woodcut (Fig. 5) gives a correct representation of the size, extent, and granular appearance of this malignant tumour.

Fig. 5.
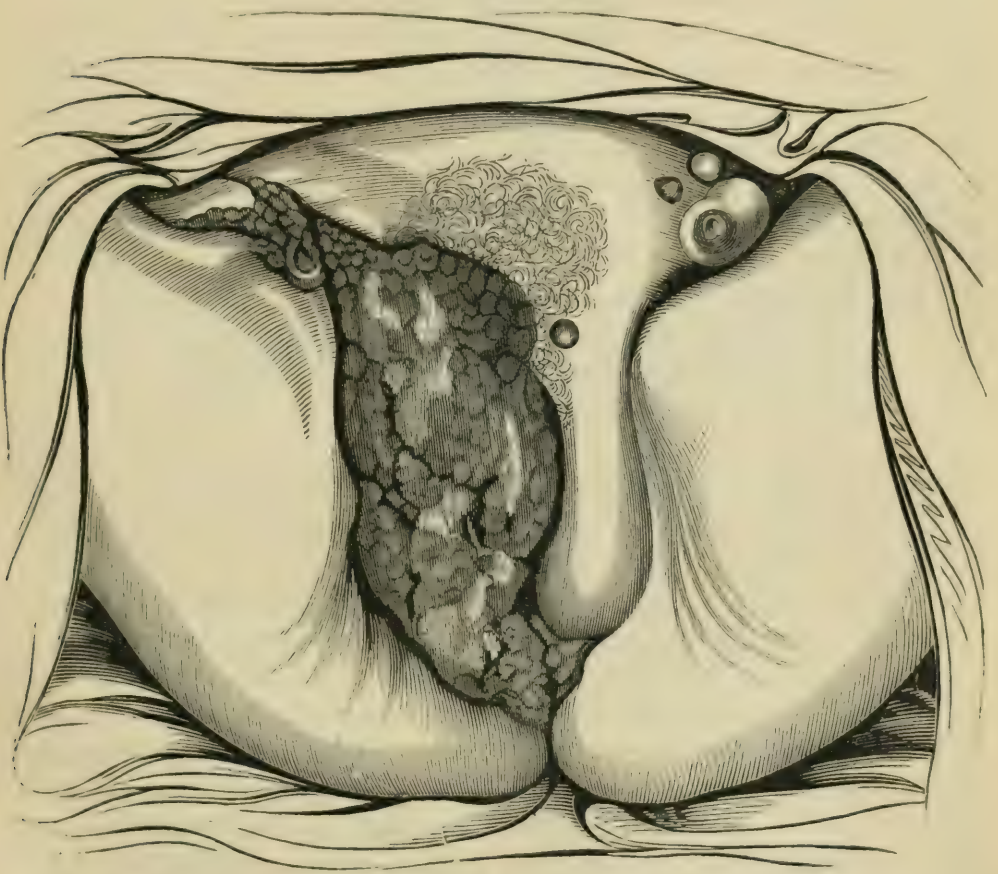


The three cases just related were examples of carcinomatous disease of the external genitals; and yet it is worthy of remark, that in no one of them was there any indication of the uterus being similarly affected, though in each a careful examination was made for the purpose of determining this very point.

The last group of cases brought forward by Dr. M‘C. embraced four cases of Tumours growing from the Vagina.

CASE IX.—*Fibrous Tumour growing from Vagina; Extirpation.* A healthy unmarried woman, about 30, admitted into the Lying-in Hospital July, 1845 ; 10 months previously she began to notice a small tumour in the vagina, that has been slowly but steadily increasing in size. It always kept within the vulva till the last two months, during which time it had been generally external, and always so when she was up and exerting herself. On examination the growth was found protruding, and resembled much in size and appearance the procident womb. The subjoined wood-cut (from a drawing by the late Mr. Neilan) shows the position and bulk of this tumour[a] (Fig. 6). It sprang from the lower part of the anterior wall of the vagina, extending down to within a few lines of the meatus urinarius. It had no connexion with the interior of the bladder or urethra. In structure it was very firm, and admitted of very little displacement. It was two inches in length, and upwards of four inches in circumference, and had nearly the same thickness from base to apex. Between the tumour and cervix uteri the intervening portion of vagina was healthy. The investing membrane of this tumour resembled that of the vagina, except towards its extremity, where there existed some superficial ulceration. It had given rise to no other annoyance than what resulted from its bulk and situation. She menstruated regularly, and had full control over the bladder.

Being satisfied that the bladder was not implicated in the formation of this tumour, it was determined to attempt its removal by the ligature. Dr. Johnson (then master of the hospital) and Dr. M'Clintock tightly encircled its base, keeping clear of the urethra, with a ligature of silk fishing line, confining it by means of Levret's canula. On the third day the discharge was fetid, and the ligature had formed a deep indentation all round. The ligature was tightened from day to day. On the sixth day the entire tumour was in a state of slough ; a transverse burst or rupture had taken place in its right side, from which a good deal of blood had flowed during the night. The pulse was rapid, and she seemed low and weak to day. On the 11th day the canula and ligature were removed, and as much of the slough excised as could be conveniently reached. By cutting away a part of the slough from day to day the whole was removed before long, and the occasional use of the warm bath, with unremitting attention to cleanliness, subdued all the swelling and inflammation of the labia. A very minute examination, three weeks after the detachment of the ligature, could not detect any remaining portion of the growth. A slight incontinence of urine existed, but this became daily less troublesome, and in a few weeks altogether ceased. This woman was seen, some months after leaving the hospital, and she continued perfectly well, and without any return of her complaint.

[a] The woodcuts illustrating this report are from engravings by Mr. Oldham.

This growth was extremely firm and unyielding, so much so as to justify the opinion of its being of a dense sarcomatous or fibrous nature. After its vitality had been destroyed it appeared just like sloughing tendon, so strongly marked was its fibrous structure.

Fig. 6.
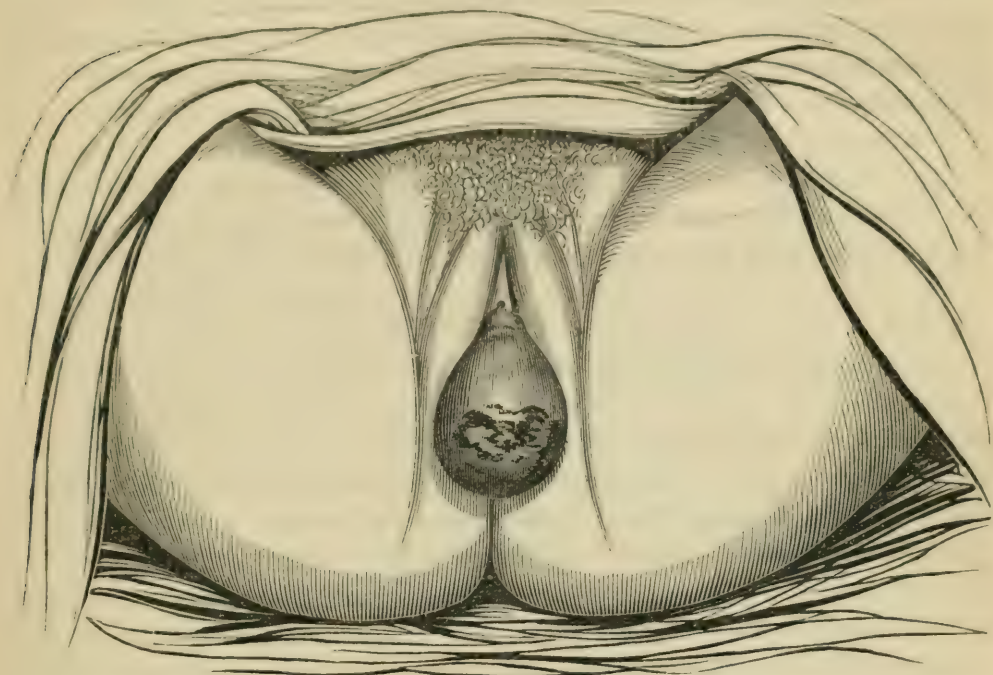


CASE X.—*Fibrous Polypus of Vagina; Extirpation.* A tall, healthy young woman, aged 23, in the seventh month of her first pregnancy, suddenly felt something to prolapse from the vulva, whilst she was in the act of running. This caused her much pain and uneasiness, and compelled her to seek advice. A firm fleshy tumour, of a deep red colour, was found protruding beyond the ostium vaginæ, but attached to the posterior wall of this canal, and about midway up, by means of a flat pedicle. This tumour was considerably larger than a hen's egg, did not bleed when handled, and was not painful to the touch; and the patient affirmed that she had been wholly ignorant of its existence till the present time. Without much trouble it was returned into the vagina, and it slipped into the pouch or depression ordinarily existing in the posterior wall, but which, in this present instance, was much enlarged. This gave her much ease; but the tumour prolapsed again. Deeming it advisable that this polypus should be extirpated as soon as possible, in consideration of the woman's advanced state of pregnancy (for it might have seriously interfered with parturition), she was removed into one of the chronic wards of the Lying-in Hospital, when Dr. Shekleton (then Master of the hospital) applied a ligature to the pedicle.

On the fourth day there was a good deal of vaginal soreness, and some

fetid discharge. As only a small portion of the pedicle was uncut, this was divided with a scissors, and the tumour removed. She left the hospital some days afterwards perfectly well. At the full term of pregnancy she returned to the hospital in labour, which proceeded most favourably, and the woman made an excellent recovery.

This was a true polypus, and resembled, in its negative symptoms, the case last related—having given rise to no inconvenience whatsoever, except the mere local annoyance produced by its bulk and accidental displacement.

Case XI.—*Fibrous Polypus of Vagina; Ecrasement.* A woman, aged 24, in the last month of her second pregnancy, was received into one of the chronic wards of the hospital, on the 5th July, 1857, with a tumour at the vulva, and just beyond the vaginal orifice, the size of a small hen's egg, and of a deep livid colour. Dr. Geo. Montgomery, then an assistant in the hospital, examined her, and found this tumour to be connected by a stalk with the posterior wall of the vagina. Dr. M'C. did not see her for three days afterwards. The external tumour had then disappeared, but the growth was found lying in the upper and back part of the vagina; and with little difficulty, or pain to her, it was brought down into view. There was some fetid, bloody discharge, which did not come on till after her admission. The tumour was now considerably reduced in bulk, softened, and of a black colour; in fact it appeared partially dead and decomposed, from the constriction exercised upon it, when protruding, by the sphincter vagina. This tumour first appeared on the afternoon of the 4th (the day before her reception into the hospital) and till then she was wholly unconscious of the presence of anything of the kind.

Thinking it desirable that this sloughy mass should be got rid of as quickly as possible, her labour being so near, Dr. M'C. put her under chloroform, on the 9th, drew down the tumour, and safely excised what remained of it with the écraseur. In three days she was up, and the discharge had nearly ceased. She went home; but returned on the 16th, supposing that her labour had come on. True labour did not set in, however, till the 20th, when she was delivered of twins. From the time of delivery she began to sink, and expired in 34 hours afterwards. The cause of death was not very apparent; no peritonitis or traces of pus. The uterus, however, was very large, and its interior was dark coloured and very fetid—almost gangrenous. The only vestige of the polypus was a superficial ulceration, the size of a sixpenny, low down on the posterior wall of the vagina.

Case XII.—*Cystic Polypus of Vagina; Puncture.* A healthy woman, aged 23, was admitted, in labour of her second child, January 23, 1861. On examining her vaginam, an oblong body was found attached to the back

wall of the canal, within an inch or two of the os uteri. This tumour was fully an inch and a half long, rounded, and as thick as a man's index finger. It contained fluid, was connected by a small pedicle, and could be brought down partially beyond the vulva, so as to be rendered visible. The wall of the cyst was of a whitish colour, and evidently very thin. As it was plain this tumour could not interfere with parturition it was let alone for the present. Her labour was easy, and her recovery good. On her ninth day, and before leaving the hospital, Dr. M'C. examined her again, and found the tumour in the same state as before. On puncturing it with a sharp pointed bistoury some transparent gelatinous fluid escaped, and the cyst immediately collapsed. The puncture caused her some little pain. This tumour had given rise to no symptom, and the woman was wholly unaware of its presence till it was discovered by Dr. Halahan during her labour.

Of the four cases last related, three were of a well marked pediculated form, and grew from the posterior wall of the vagina. The growth of these tumours was imperceptible, and wholly unattended by any symptoms; and their presence was discovered by mere accident. In the other case the tumour had not a distinct pedicle or neck, but it possessed a strikingly fibrous character. Its seat was the anterior wall of the vagina, so low down as to approach the meatus urinarius. In fact the situation of this tumour was the same as that of the growth described by Sir C. M. Clarke, under the name of "thickening of the urethra," but it bore no other resemblance to it whatsoever.

Dr. John A. Byrne read the following case of *Rupture of the Uterus, in which recovery took place.*

M. A. Butler, aged 40, was admitted into No. 8 ward on the night of September 12, 1860, about 10 o'clock p.m., in labour of her fourth child. On making my nightly visit to the ward, at 11 p.m., I saw her, as well as the other patients who had been admitted since the evening visit, and I examined her. I found the os uteri soft and dilatable, not distended, the head presenting, the membranes had been ruptured for a few hours before admission, but she had scarcely any labour pains, and, in fact, she could not as yet be said to be in labour. The fetal heart was very distinctly heard in the pubic and right iliac regions and, to all appearances she was progressing very favourably.

At about 7 o'clock a.m., on the following morning, the nurse of the ward came to me, and requested that I might see her, being desired to do so by the gentleman on duty. I visited her accordingly, and, on making inquiries, I was told, that the pains had ceased for some time, and that she had just vomited something, which, on examination, appeared to be fluid which she had been drinking.

I now made a very careful examination, and found that the head had descended, but could not be said to be well in the pelvic cavity. The presenting part too, viz.: the anterior fontanelle, was felt behind the pubis, it was large, soft, and elastic to the touch, and the bones of the scalp were loosely separated. The head, in fact, presented in a well marked degree all the signs of hydrocephalus.

The pelvis seemed sufficiently roomy, there was no deformity, no tumour, the sacro-vertebral promontory was not very distinct, and evidently, the dystochia was the result of cephalic, not pelvic, disproportion.

There was a slight discharge of blood from the vagina, but not to any extent.

I next proceeded to examine for the sounds of the fetal heart. And after a most careful examination in which, subsequently, Dr. M'Clintock and Dr. Halahan took part, not the most remote trace of either it or the bruit placentaire could be detected, although a few hours before they had been heard very distinctly.

Her general condition was sufficiently alarming, her face had an exceedingly painful and anxious expression, her lips were pale and clammy, she moaned and complained of extreme pain over the whole abdominal region; and this pain was increased by every attempt made to examine the uterus; she cried out not to touch her upon any account, the abdomen was very tympanitic at the upper part, but no symptom of extravasation of the uterine contents existed. She also complained of a symptom which is not usually noticed in descriptions of this accident, but which I have remarked to have existed in some of the cases which I have seen, viz.: a spasmodic pain passing through the upper part of the sternum and back to the spine. Her pulse was small and thready; she had at first vomited all the contents of the stomach, and, subsequently, a dark coloured fluid; and, in addition, there was complete absence of uterine action.

On making inquiries, I ascertained that all her previous labours, three in number, had been easy. She had had three children at the full time, but had aborted, at the third month in her last pregnancy; her general health had been tolerably good, although she was much exposed to hardship, being obliged to attend to a small apple stand in the open street. She was a woman of middle size, had a hard withered look, but presented no appearance of any deformity.

Now, taking a most careful survey of all the symptoms which presented themselves, I came to the conclusion that the case before us was one of rupture of the uterus, and that immediate delivery should be effected. In this view Dr. M'Clintock, the master of the hospital, concurred. He, as I have mentioned already, and Dr. Halahan, made a most careful examination for the sounds of the fetal heart, but they could not be heard in any part of the abdomen.

I proceeded accordingly, assisted by them, to deliver her, by the opera-

tion of craniotomy. On the introduction of the scissors, about one half-pint of serum came from the cavity of the cranium : this having flowed out, the remainder of the delivery was accomplished rapidly. No blood flowed from the fetal skull, and the placenta was expelled immediately after the child, which was a male, of about the average size, very well developed, and not malformed, with the exception of the enlargement of the head.

Some brandy was administered, and two grains of solid opium, with one of capsicum, in a pill; and a sinapism placed over the epigastrium, and the opium was ordered to be repeated in grain doses every hour.

Sept. 13, 4 o'clock, P.M., $7\frac{1}{2}$ hours after delivery.—Vomiting still continues; some reaction has taken place; she complains of great pain over the uterus; eighteen leeches were ordered to be applied.

At $7\frac{1}{2}$ o'clock, P.M., 12 hours after operation.—Pulse 120, small; the opium pills were ordered to be stopped, and one half grain of calomel and one half grain of opium to be given every hour.

Sept. 14, 26 hours after delivery.—Pulse 120, small and hard; she was very uneasy during the night; the stomach had been very sick, and still continues to be so; she can bear pressure over the uterus better than yesterday; expression of face very anxious; ordered to continue pills; 12 leeches to the uterine region; a sinapism to the epigastrium; seltzer water to drink.

Evening.—Condition very much the same; the pills to be given every three hours.

Sept. 15, third day. — Pulse 98; slept a little during the night; uterus extremely tender; considerable tumefaction of the abdomen; sickness still continues; she was ordered muriate of morphia, calomel, capsicum, of each $\frac{1}{4}$ grain, in pill, every second hour; a sinapism to the epigastrium, and ice to be placed in the mouth.

Evening visit.—Pulse 104, small and hard; the bowels moved too often; she was ordered to omit the pills, and 1 scruple of mercurial ointment to be rubbed in, night and morning.

Sept. 16, fourth day.—Pulse 102; characters the same; did not sleep well; dozed occasionally; but on account of the bowels she was very uneasy during the night. She had had an anodyne enema, which, to some extent, relieved her. A large linseed poultice was ordered to the abdomen, and it to be smeared with mercurial ointment.

Evening visit.—Pulse 108; very feeble; there is great thirst; has distressing hiccough; she was ordered to have dilute hydrocyanic acid 2 minims; Batley's sedative liquor, 15 minims, three times during the night, and to have 3 ounces of wine, and the poultice and mercurial ointment to be continued.

Sept. 17, fifth day.—Pulse 94; slept a little during the night; complains of great thirst; vomiting somewhat relieved; still a great

deal of tenderness and hardness of abdomen ; diarrhœa relieved ; she was ordered to continue poultice and draughts ; chicken broth.

Evening at 6½.—She had a rigor ; pulse 96 ; to continue wine and draughts.

Sept. 18, sixth day.—Pulse 94 ; passed a restless night ; vomiting still continues ; abdomen tender ; ordered a sinapism to the epigastrium ; 15 grains of mercurial ointment at night and morning.

Evening.— Pulse 108 ; condition very distressing ; vomiting during the day ; very low ; ordered brandy 3 ounces ; a blister to abdomen ; morphia ½ grain ; and dried soda, 2 grains.

Sept. 19, seventh day.—Pulse 112 ; slept a little ; vomiting somewhat relieved ; mouth not affected yet ; abdomen tumid and tympanitic ; is very cheerful ; thinks that she will recover ; ordered mercurial ointment to the blistered surface ; brandy 4 ounces ; to continue pills ; to have seltzer water ; and to take 2 grains of sulphate of quinine in mixture 3 times in the day.

Sept. 20, 8th day.—Pulse 116 ; some sleep during the night ; does not complain of much sickness to-day ; mouth not touched : considerable abdominal tumefaction still ; blister very sore and gives her great pain and annoyance.

Evening, at 6¾.—She had a rigor.  Continue pills, and to have four ounces of brandy.

Sept. 21, 9th day.—Pulse 116 ; not much change ; did not sleep much during the night ; complains of very great weakness ; ordered brandy, three ounces, and the mixture containing quinine.

Evening.—To have the same amount of brandy, and one half grain of morphia.

Sept. 22, 10th day.—Pulse 110 ; condition much the same ; had some sleep ; has distressing hiccough ; ordered to continue the brandy ; to have the morphia at night, and chicken broth.

Sept. 23, 11th day.—Pulse 108 ; is cheerful ; her back is red and tender ; dislikes the brandy ; to have wine, four ounces, and the same complement of wine at night, and the morphia.

Sept. 24, 12th day.—Pulse 108, small ; had some sleep ; her tongue is sore from some ulcerations ; *a purulent discharge observed coming from the vagina;* ordered to use gargles, wine, and nourishment ; vagina to be syringed.

Sept. 25, 13th day.—The vaginal discharge very offensive ; mouth very sore ; considerable diarrhœa ; continue wine, &c. ; ordered—opium, one half grain ; ipecacuanha, one half grain ; nitrate of potash, four grains ; three times a day.

Sept. 26, 14th day.—Pulse 104 ; mouth still very sore ; ulcers to be touched with solution of nitrate of silver ; continue medicines and wine, &c.

Sept. 28, 16th day.—Pulse falling, 92 ; she is improving gradually ;

there is still, however, some diarrhœa, for which she was ordered suitable treatment; offensive vaginal discharge still continues.

Sept. 30, 18th day.—Pulse 92; progressing favourably; no symptoms indicating danger; surface of abdomen healing; the abdomen is soft, and not painful, with the exception of the lower part, where there is still some pain felt on pressure; the leech-bites, however, are very sore and painful; she sleeps, and is able to take nourishment; is very cheerful; she still, however, suffers from occasional diarrhœa, which continued at intervals, until

Oct. 4, 21st day, when she presented the following signs:—Her pulse was 92—of a better tone, however; she sleeps tolerably well; discharge from vagina not so offensive; diarrhœa greatly checked; some pain, on pressure still, over lower part of uterus; is exceedingly cheerful; has some appetite. She went on in this manner, with varying diarrhœa, controlled by medicines, until

Oct. 14, 31st day, when her pulse had fallen to 84; and the only annoying symptoms which remained were the ulcerated condition of the mouth and the diarrhœa, which gradually improved. She was allowed to sit up at the fire in her ward; her appetite began to return; and in fact she was pronounced out of danger; and on

Oct. 27—37 days after her admission—she left the hospital quite well, some weakness, however, still remaining.

On the day before her departure we examined the vagina and uterus with the speculum, and we observed what appeared like a ridge of granulations across and through the os uteri. It had the appearance, in fact, as if a portion of the right wall of the vagina had been united to the middle of the cervix uteri. On touching this ridge it bled freely, and pus exuded from the line of junction; and, on looking at this, we had not the slightest doubt upon our minds that we were looking upon the new structure which filled up the rent, and we were quite satisfied that it was in this situation that the rent or fissure had taken place.

In about three months afterwards I met this poor woman near my own residence, and she addressed me, and asked me did I remember her. I asked her to call upon me; which she accordingly did; and she then informed me, that since she left the hospital she had enjoyed very good health, with the exception of not having menstruated, until about three weeks before I saw her. Before the menstrual discharge she felt what she compared to a *beeling* in her side; and this was followed by the discharge of a thin bloody fluid, resembling, as she said, wine and water. This continued about the usual time of the menstrual flux, and then disappeared. She promised to return to me at some future time, to be examined, but she did not; so that I am unable to give any further history of her case at present.

I must apologise for having entered so fully into the details of this

case; but it happened to be one of those in which details as to treatment, progress, &c., are necessary. Such a case may happen at any moment to any of us engaged in practice; and the recital of the manner in which this patient was so unexpectedly affected by this complication of labour—then rallied from collapse seemingly fatal—then became affected with reactionary symptoms, which became so aggravated as to menace dissolution; but which, by means of the treatment employed, gradually yielded, and were finally subdued, and afforded to us the pleasing gratification of seeing a favourable termination to an accident which is most properly considered as one of the greatest calamities that can befall a parturient woman—will not, I hope, be deemed unimportant.

The objection might, possibly, be urged by some persons that the array of symptoms which I have given was not sufficiently clear to induce us to pronounce this positively a case of rupture of the uterus. We see that many of the symptoms of this accident, as laid down by authors, were absent; as for instance, hemorrhage—recession of the presenting part—the absence of any sensation, on the part of the patient herself, of the accident having occurred—the absence of any part of the body of the child in the abdominal cavity of the mother. Now, no doubt these symptoms were absent; and our diagnosis was founded upon the presence of the remaining symptoms—such as the extreme collapse—collapse which, I believe, is peculiarly indicative of this accident—upon the agonised look, which, to one accustomed to see cases of this kind, almost always prompts him to examine for the remaining symptoms which are pointed out by authors as pathognomonic of rupture—upon the abrupt cessation of the labour pains—but founded, above all, upon that symptom which is peculiarly indicative of it—particularly when combined with other signs—I mean the cessation of the fetal heart-sounds, a symptom which has been so strongly dwelt upon by Dr. M‘Clintock in his paper upon this subject—and founded also upon the manifest fact of an existing disproportion between the head of the child and the osseous passages of the mother.

Now, taking all these circumstances into consideration, it will be admitted, I think, that our diagnosis of this case was correct, and that we were quite justified in regarding it as one of rupture or laceration of some part of the uterus; of what part it mattered little as to practice, as our treatment was at once indicated, and was quickly carried out.

As authors inform us we must not expect, in every case of rupture of the uterus, to meet the same identical symptoms. In some the majority of the signs will be present, and some few may be absent; and again, in other cases, the latter may be present, and the former may not; so that it is well that we should be prepared for this, and not hesitate about what is to be done, because we are not satisfied on account of the absence of one or more signs. The case is one which leaves no time for indecision, and our remedy must be prompt.

Notwithstanding all that has been written upon this subject, and all the statistics which have been given with regard to the comparative frequency of this accident in primiparæ and multiparæ, we generally find that it is an accident which occurs with greater frequency in those who have had children.

If we add to the 75 cases collected by Dr. Churchill those related by Drs. Sinclair, and Johnson, and Hardy, and M‘Clintock, and this, the total is 102; and out of this number rupture of the uterus occurred in but 10 primiparæ, or in about one-tenth of the whole; and out of Dr. Trask's collection of 303, it occurred in but 24 primiparæ, or something more than one-twelfth of the whole. So that we observe that there is a very close approximation in the results arrived at by these observers.

The history of those cases tells us that no age is exempt from the occurrence of this accident—the young, the middle-aged, and those more advanced in years are all subject to it—but not equally so. Those about the middle age are most subject to it, according to the tables of Dr. Collins. Thus, out of 34 cases, 19 occurred between the ages of 29 and 37, exclusive of those two ages, in a range of years between 16 and 40. Now, excluding accidents, excessive uterine action, narrowing of the pelvis, or disproportion of any kind, we may, I think, with tolerable certainty, account for the greater frequency of it, at or about this period, by the change which the uterine tissue undergoes either by fatty degeneration or ramollissement—the *post mortem* examination generally revealing some such change in the part of the uterus where the laceration has taken place.

Although excessive uterine action may *per se* produce laceration of the uterus, yet, as this and many other cases recorded by authors exemplify, we see that rupture is very often found where there has been very little uterine action. How seldom do we find the uterus to rupture in primiparæ, where the action is strong, and where there are many obstacles to overcome; how often have we to introduce the hand to turn or remove the placenta without injury being done to the uterus; how often, too, in cases of disproportion we see the uterus acting powerfully and for a long time, and yet this accident does not occur; but in the case which I have related at no time was there strong uterine action, or at least what was sufficient to produce this injury, if, perhaps, she had not to the enlarged head of the fetus also had, superadded, a softened or thinned cervix uteri. These two causes combined, I have scarcely a doubt, were conducive to the occurrence of rupture in this case.

Hydrocephalus is generally laid down as one of the causes which may produce, or rather conduce to this accident; yet in neither of the reports which have lately emanated from the Rotundo Hospital is there a case in which it could be attributed to hydrocephalus; although Murphy, Lee, Collins, Ramsbotham, and others relate some cases, it is not at all im-

possible that the child in this case could have passed through the pelvis, it was not a case of enormous hydrocephalic enlargement; the fluid contained did not amount to one pint; the head was partly down in the pelvis; and, in my mind, there was scarcely a doubt that if the pelvis were sufficiently roomy—as we had no reason to suppose was not the case— and if the action of the uterus had been strong, and the tissues of the uterus healthy, the child might have passed through alive. We know that many cases are on record of children with larger heads than this having passed through a properly formed pelvis. Merriman mentions a case in which the circumference of a hydrocephalic head measured, after being born alive, 22 inches. Now in this case which I have detailed there was scarcely any uterine action at all; and the uterus, it is highly probable, gave way, perhaps, under the influence of a feeble pain, which, acting in conjunction with too large a head, and too soft a uterus, pro- duced the laceration.

With regard to the recovery of patients from this accident, the tables on this head are not very encouraging; taking the number of cases recorded by Dr. Churchill, which amount to 80—and adding those related by Drs. Sinclair and Johnson, 17—this case 1; total, 98—we have only 11 recoveries, or a little less than 1 in 9.

Now this is confessedly a very small number of recoveries; but still the result is one that should lead us to have hope, and to trust in the recuperative powers of nature, even in such a formidable complication of labour as ruptured uterus. We know how to treat this accident better now than formerly. We know the beneficial effects of large doses of opium, and the advantages of the non-depleting method of treatment; and had we even on record no other case, as a proof of the efforts of nature to effect a cure, the wonderful case so ably recorded by Dr. Mackeever, in which, in addition to the rent in the uterus itself, there was also a sloughing of a considerable portion of the intestinal canal, and in which the patient survived, and afterwards became pregnant, would induce us to not despair of a successful termination to this formidable accident.

The occurrence of rigors on the fifth and eighth days, respectively, is matter well deserving our attention. We know that this is in general a symptom denoting the occurrence of pus formation; and it is scarcely presuming too much to attribute, in this case, the rigors to such a circum- stance, particularly when we remember that they were succeeded by the escape of matter from the vagina, which continued for a considerable time; and the seat of this escape of matter was afterwards, on the recovery of the patient, manifested in a well-marked manner. If this were true, it is a beautiful illustration of the manner in which it may be supposed that nature effects a cure in such cases. Firstly, we had in- flammation, peritonitis, effusion of fibrin, formation of a pus-secreting

surface, and the entire mass of the structures engaged well guarded by the fibrin poured out around them; and, in fact, the whole mass might be said to resemble the cyst of an abscess.

DR. MacSwiney exhibited the uterus of an unmarried woman, aged 58, which had an oblong tumour, fully the size of the uterus itself, attached by a rather narrow, and very short pedicle to the fundus of the organ.

The patient, from whose body it had been taken, had recently died under Dr. MacS.'s care, in Jervis-street Hospital, from a very severe attack of acute desquamative nephritis, after an illness of only about fourteen days. When detailing the history of her illness, she said that she had enjoyed excellent health all through life—never having been in the least ill until seized with the malady under which she laboured when she came into hospital. She had never experienced any inconvenience or distress from the affection of the womb. It was first detected when the *post mortem* inspection of the body, with a view to ascertain the condition of the kidneys and other parts, was being performed. The uterus was of the normal size of the virgin organ, and healthy. The tumour, situated as above described, was about $2\frac{1}{2}$ inches long, $1\frac{1}{2}$ inch broad, and 1 inch thick. It was nodulated, and of a whitish-brown colour. It felt hard, and weighed heavy. Upon making a section into its interior the edge of the scalpel was turned upon a considerable amount of hard substance with which it came in contact, and which was very difficult to divide. In fact ossific degeneration had proceeded to a considerable extent in the structure within the tumour.

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# TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY.[a]

*( Continued from* vol. xxxii. p. 222.*)*

SESSION 1861-1862.

OPENING MEETING, OCTOBER 9, 1861.

## ANNUAL ADDRESS

By JOHN POPHAM, A.M., M.B., Licentiate of the King and Queen's College of Physicians; Physician to the North Infirmary and Union Workhouse, &c., &c., President of the Society.

In seeking for a subject upon which I may address the members of the Cork Medical Society at their opening meeting, it occurred to me that a brief retrospect of its foundation and progress may not be unacceptable

[a] These Reports are supplied by Dr. W. P. Bernard, Secretary to the Society.

to our junior brethren. As I happen to be among the few original members now remaining—a list, comprising Drs. Harvey, Bullen, Finn, O'Connor, Tanner, Hobart, &c.—who " rocked the cradle of its infancy," I may, perhaps, be permitted to speak of it, in common with them, with feelings somewhat akin to parental partiality.

The Cork Medical Society owed its beginning to the medical staff of the city hospitals. The late inspector-general of the forces in Ireland, Sir James Pitcairn, consulting surgeon to the South Infirmary, always anxious to promote a spirit of harmony amongst the members of our profession, proposed to the medical officers of the infirmaries to meet month about at each others' houses ; and after an innocent participation of the festive comforts, to terminate the evening in consulting together upon those difficult cases occurring to each other, which may require elucidation from united experience and skill. At one of those pleasant reunions—those *" noctes cœnœque deûm"*—it was resolved that we should extend more widely the advantages of our little medical conference, by changing its peripatetic character, and a plan, founded on the rules of the several metropolitan medical societies was thrown into form by Dr. Harvey, as secretary, and obtained favour with our local brethren. Since then, with some necessary modifications, it has passed through a long and honourable probation ; and in looking back we have but one regret—that time has dealt hardly with us. The honoured names of Pitcairn, Bull, Howe, Lloyd, Haines, are still fresh in our memories, which testify both to our private sorrow and to the public loss which our profession, in this city, has sustained.

Before the institution of the medical society, our city and county, though always abounding with excellent practical physicians and surgeons, can scarcely be said to have contributed *largely* to medical literature. Some valuable publications and articles, by various Cork physicians, have appeared at intervals since the commencement of the present century ; and we can refer back to the works of Dr. Joseph Rogers in 1734, upon the epidemics in our neighbourhood, and of Dr. Maurice O'Connell, in 1746, giving an account of the praxis of Cork, but no *continuous* effort took place till the selected papers of this society were published. In 1850 I had, as secretary for that year, the gratifying privilege of preparing our *first* Report for the *Dublin Quarterly Medical Journal*. Our little offering was received with favour, and since that time the proceedings of our society have taken their place, with filial respect, in that Journal, alongside the riper experience and maturer knowledge of its distinguished precursor, the Dublin Pathological Society.

> " Dextræ se parvus Iulus
> Implicuit, sequiturque patrem non passibus æquis."

What better example for its imitation could it desire ?

It needs but little argument to show that it depends on learned societies themselves whether their transactions become of positive or negative value. Such societies, by an union of intellectual ability, and a division of labour, can effect what individuals must fail to accomplish; but they are subject to periodical fits of energy or depression. Indolence is a "taking" disorder, but, happily, emulation may become equally contagious. It is wonderful how much can be accomplished by a few energetic minds. Like iron sharpening iron, they make other minds keen. When unity of action can be reckoned on, all that is required to produce valuable results is to give it a proper direction. Let me give you an example how the efforts of many, directed towards a single object, have been remarkably successful. At the outbreak of the famine fever of 1847 and 1848, circulars were issued from the *Dublin Quarterly Medical Journal* to the practitioners throughout Ireland, requesting information upon a number of well-selected topics, respecting the nature and extent of the epidemic. "To this circular," we are told, "more than seventy answers were received, being, in some cases, extensive reports, and in others satisfactory replies of shorter extent." Now what were the results of this inquiry? The universality of this formidable epidemic was at once established, there being but one district in Ireland, namely, Rostrevor, in which it had not more or less prevailed. By the co-operation of so many trustworthy observers, a body of evidence has been collected upon this particular fever which has rendered its natural history one of the most complete in medical annals. Now, how could any single, unassisted physician, however accomplished, give an account so comprehensive as this? He could only view the disease within a circle of a narrow radius, and could speak but doubtingly upon the varying phases which it must have presented when the disturbing influences of differences of situation, climate, geological condition, diet, and other circumstances altering the type of disease, were brought to bear upon it. In order to form a fair opinion of the value of these reports, we have only to compare their fulness with the meagre descriptions of epidemics of fever previous to the present century.

I may quote another illustration to the same effect from the valuable papers of Drs. Stokes and Cusack, upon the mortality of Irish medical practitioners. We had, in the famine year, become painfully accustomed to the mournful iteration of the ill-boding words—"died of fever, caught in the discharge of his medical duties;" but we did not know the fact, until they discovered it by circulars sent to every corner of our island, that in the year 1847, one-fifteenth of the whole medical community was swept away, and that while the mortality from fever, compared with deaths from all causes, was as 1 in 10 for the whole population, it was as 1 in $2\frac{1}{4}$ for medical men in Ireland. The mortality of Irish practitioners was thus, by the efforts of individuals acting upon the whole

profession, proved far to exceed that of army surgeons, even amidst all the chances and privations of war.

I have brought before you these examples as worthy of imitation by ourselves. What is there to prevent this society, unless our *vis inertiæ*, from sending out circulars of inquiries when any suitable object for investigation occurs, and thus enlisting the experience and research of our county or provincial brethren? We must not rest content with recording cases of ephemeral interest, but strike out boldly in quest of matter of more general and durable utility. Why is the Académie de Médecine of Paris so trustfully consulted by the French government in all cases of public health? Is it not from the admirable reports which it issues on all disputed questions of disease and hygiene? Whenever a new operation in surgery is proposed, a new medicine is to be tested, a new sanitary scheme to be estimated, it appoints its commissions of inquiry. Too large a body for conjoint action, it divides and subdivides its members, telling off two, perhaps, for one question, three for another, and always selecting those members whose special acquirements enable them to probe the matter home, with science and skill. Why should not our society, abounding with well-educated energetic young men, and a sprinkling of grey-headed seniors, have, after such high examples, our committees to test the claims of the useful or fashionable medical theories of the day? There are now floating before the minds of the public many interesting subjects of social science; many suggestions about hospital reform and general therapeutics. If we do not take up these questions of ourselves for discussion, we must be driven to do so by the force of circumstances. Non-professional gentlemen, and what is more tantalizing, even non-professional ladies, are actually entering the lists against us, and are laying a kind of exclusive claim to the department of public health. They are converts to the doctrine of free-trade in physic, and there is this difference at least between us and them, that if we are wisely sceptical about the success of a project, they evince a happy dogmatism. If we sometimes judge without deciding, they decide often without judging; and hence we find a number of crude speculations fluttering about the public ears on questions which our profession is accustomed to pronounce upon with some diffidence. I am far, indeed, from condemning the well-intended exertions made by philanthropic ladies to reform our prisons and our workhouses, our factories and our schools. I would not interfere in the least with their inspection of the cook-house or laundry, or in the more important subject of industrial education, but they go beyond their province when, as in the late Social Science Meeting, they profess to prescribe for the sick. Why do I dwell upon these topics? It is to urge upon my medical brethren that the art of medicine is widening its circle, day by day, and that the public will not be satisfied unless its medical officers thoroughly understand the

great measures of sanitary improvement. And when such questions are taken up with zeal by well-educated physicians, qualified to pronounce upon them by a course of study, the most extensive of any of the learned professions, the opinions which they do pronounce shall be with a voice of authority which no community will be so adventurous as to think of resisting.

There is but one subject more upon which I wish to make a remark; as it is much misunderstood by the public, who think that our profession is a purely practical one, and that the study of books is vastly inferior to that of nature for learning medicine. I would reply to this fallacy by the words of the wisest observer of nature that ever lived; "If a man," says Bacon, "read little, he had need of much cunning to seem to know that he doth not. Crafty men contemn studies, simple men admire them, and wise men use them." They who profess to disregard study are either obtuse or hypocritical, too dull to see their own ignorance, or too cunning, as Bacon says, to let it be seen. What would each of us become if denied access to the sages of medicine, and confined within the narrow limits of our own genius? The chief improvements in medicine have come not from what are called self-educated men, but from men of philosophic minds, who have not merely read, but also digested. In one sense only is this opinion correct. The active duties of the practitioner lessen the time for study. With, however, all the drawbacks, whether self-imposed or from the tyranny of circumstances, I believe that it is true of the medical profession, that while it can point with honest pride to many of its most enlightened members who branched off into the flowery paths of natural and experimental science, it is, taken as a class, amongst the best informed in the community.

*Case of Aneurism of the Descending Thoracic Aorta, complicated with Pericarditis and Pleuritic Effusion.* By Dr. W. PETERSON BERNARD.

Michael Horgan, aged 22, unmarried, and of very intemperate habits, a labourer, was admitted into the Workhouse Hospital, under the care of Doctor William C. Townsend, on 9th October, 1860, suffering from violent palpitation, on the least exertion, and pain in the left side of chest.

His health he describes as excellent (being able, without fatigue, to follow his laborious occupation), up to two years ago, when he was attacked with intermittent fever, for which he was treated in this hospital from time to time. When last admitted, in May, 1860, he complained of weakness in the loins, and pain in left side. The chest was carefully examined, and no disease detected; the urine was also tested for albumen, but none was present. After a few days, during which he received treatment more dietetic than medical, at his own request he left the hospital, much relieved but not free from occasional pains. He now

went to the neighbourhood of Blarney, where he pursued, without inconvenience, his usual avocations. His nearness to the Turkish baths, and free access to them, induced him to make use of them, (entirely on his own responsibility and without medical advice), no less frequently than 72 times in ten weeks, frequently, during the first fortnight, luxuriating in two, daily. During the use of the baths (and he was firmly persuaded that consequent on their use) the palpitation became more persistent and distressing, followed in a few weeks by the *fixed pain* in the chest, from which, up to the time of his death, he was never entirely free, the lumbar pain attacking him *occasionally* as before.

State on admission, 9th October, 1860.—Body wasted, appearance anemic, with a bilious tinge, countenance expressive of anxiety, tongue clean, secretions normal, eats and sleeps badly; decubitus entirely on left side; pulse in the recumbent position, right wrist, 92 and regular; no pulse felt in left wrist, but about the middle third of the forearm it becomes perceptible, beating at 96 and regular. The heart's impulse is very excessive, the heaving of the chest being perceptible when standing some distance from the bed; area of cardiac dulness much increased; respiratory sounds clear, and no appearance of dyspnœa. He complains of pain in left side of chest, hardly noticeable while he is still, but becoming distressing on very little exertion.

To have of the tincture of muriate of iron, and tincture of digitalis, 10 minims three times a day, his diet to consist of bread, meat, and one pint of porter.

October 13th.—About midday yesterday, whilst walking about the ward, felt the pain suddenly and completely leave the chest and attack, with severity, the loins, resuming its former position in about an hour.

14th.—Slept but little last night, because of the palpitation and pain in the cardiac region; distinct murmur heard with first sound of the heart when he assumes the erect position, much less distinct when recumbent. Heart's impulse perceptibly increased since last report. Omit the tincture of iron, and continue the tincture of digitalis.

15th.—Had a good night, and looks more cheerful; palpitation and pain much less; murmur scarcely perceptible in any position; pulse in right wrist, 84, regular and firm.

16th.—Slept well, and is almost free from pain, but cannot lie on the right side even for a few minutes.

17th.—Had a tolerably easy night, decubitus same as at last report; pulse 93, regular; pain in precordial region entirely disappeared; cardiac murmur with first sound very indistinct in recumbent position, disappearing entirely when placed in a sitting posture, impulse very strong. Continue tincture of digitalis, and the diet as before.

18th.—Feels much better than for several weeks past, and can now lie on either side without the slightest inconvenience; complains of the

weakness of the loins, occasionally amounting to an aching pain; cardiac murmur very distinct and rough when examined in the erect position; not quite so distinct when recumbent. Continue tincture of digitalis, increasing each dose from 10 to 15 minims.

20th.—Heart's impulse enormously increased since last report; feels palpitation more to mesial line; relishes his food, secretions fairly carried on.

22nd.—Had a good night's rest, looks and feels better.

24th.—Complains of the palpitation, which prevented his getting much sleep last night; his spirits are, in consequence, very depressed; pulse 96, and regular; impulse and murmur, both as aggravated as when last reported. Continue digitalis, and to have a desert spoonful of cod liver oil three times in the day, with the hope of checking the excessive wasting which is going on.

26th.—Cannot lie on the left side, but had a good night, and is more hopeful; jugular pulsation very distinct.

30th.—Pulse, 84, feeble but regular; palpitation less distressing; cardiac murmur not so distinct; jugular pulsation more evident than at last report. Continue cod liver oil and tincture of digitalis, the latter to be reduced to 10 minims each dose.

November 6th.—seems stronger and improved in every respect.

A few days after last report, he was transferred to the South Infirmary, being still under Dr. Townsend's care, and with the same line of treatment continued. There he remained for about three weeks, and then, feeling so much better, he went into the country, and was not again under observation until September, 1861, when he was readmitted into the Union Hospital.

1861, September 26th.—He states that during the many months he was out of hospital, he was able to earn a livelihood by labouring work, chiefly of a light character, such as whitewashing, &c.; the pain in the loins was not at any time very severe, though seldom entirely absent. The palpitation had of late become very distressing, and after mounting a high ladder, he had frequently, when he descended, to throw himself on his face and hands for a few moments to relieve the palpitation and attendant pain in the chest; his appetite began to fail, and his strength so perceptibly declined, that he was reluctantly compelled to give up a life of freedom for the comparative restraint of an hospital.

His habits of late were temperate, rarely exceeding a pint or two of porter in the day. His appearance is now very anemic, and muscles greatly wasted, tongue clean, bowels acting fairly; urine scanty and high coloured, no albumen; appetite very bad and stomach irritable; complains much of palpitation, and soreness over left side of chest, which is found, on percussion, to be extensively dull, occupying not only the cardiac region, but also the base of the left lung; the sounds of the

heart are distinct but feeble, with marked *bruit*; jugular veins of both sides are very much distended, no pulsation at either wrist; there is no dyspnœa, for the past three or four weeks he can only lie on his back or right side.

A mustard sinapism to be applied over the chest. His diet to consist of beef-tea, wine and soda-water.

September 27th.—Had a bad night owing to the "heaving of the chest," (the pain was very much relieved by the sinapism); has suffered for the first time from slight dyspnœa; pulse at the wrist 100, and extremely feeble; the chest was not carefully examined, as the attempt seemed to give him pain.

The sinapism to be repeated night and morning, and his nourishment continued; to have, at his own request, two eggs at breakfast hour.

28th.—Had an uneasy night, the respiration again free from embarrassment; left side of chest prominent, evidently from increased effusion; impulse of heart feeble and entirely to right side, the apex beating inferiorly and posteriorly to right nipple, no murmur perceptible; the lumbar pain has become more aggravated, but is now entirely referred to right lumbar region.

Mustard stupes to be applied to the loins, and his wine and beef-tea continued.

30th.—Sinking rapidly; increasing dulness, and absence of respiration over entire of anterior and lateral portion of left lung, save at the extreme portion of apex, where the respiration is puerile; posteriorly it is clear on percussion, and the respiratory sounds normal.

October 1st.—Had a good night; is quite free from pain and dyspnœa, and seems rallied.

3rd.—Lumbar pains again last night, but this time complained of all over the back, and not confined to any one spot.

Mustard stupes to be applied to back and loins, and his nourishment continued.

4th.—Pain much relieved by the stuping, but he is extremely feeble; no pulse to be felt in either wrist, nor in the temporal arteries.

7th.—Still weaker than last report; is again suffering slightly from dyspnœa; extremities cold, the hot jars are constantly applied; no trace of anasarca; tip of nose quite black; appears as if gangrene were setting in; he is free from pain.

8th.—Rapidly sinking; decubitus entirely on right side; black appearance of nose spreading considerably (involving fully a third); is now undoubtedly gangrenous.

10th.—Died this morning; was free from suffering at the close, and his intellect clear.

*Post Mortem Examination.*—When dividing the costal cartilages at left side, serous fluid was found to well out, and on raising the sternum, the

left side of the thorax was found to contain a considerable quantity of serum; the lung at the same side was collapsed, and lay against the posterior wall of the thorax, where there were some slight pleuritic adhesions; the pericardium was found very much distended, extending into the right side of the thorax; an opening was made accidentally into the pericardium, through which the contained fluid escaped, (the fluid contained in the pleural cavity and pericardium, was found to measure over four pints): the heart and the cardiac surface of the pericardium, were both coated over with a thick deposit of lymph, which presented a peculiar granular appearance, both were highly congested; the mitral valves had a slight deposit of lymph on their surfaces; the other valves appeared healthy; the left side of the heart was considerably thickened, though the organ, as a whole, was but little increased in size; the right lung was everywhere adherent to the costal pleura, the strength of the adhesions, particularly posteriorly and inferiorly, making its removal a matter of much difficulty.

On examining the thoracic viscera, a tumour, as large as a goose egg, was found in the lower part of the posterior mediastinum, its inferior edge reaching as low as the diaphragm; this, on examination, proved to be an aneurism of the descending thoracic aorta, though undetected during life; the most careful effort to remove the sack complete was unsuccessful in consequence of its firm adhesion to the vertebræ. On cutting into it, five of the vertebræ were found very much eroded, appearing to constitute the posterior wall of the aneurismal sac; a quantity of coagulated blood was evacuated, and a large mass of fibrin removed. The liver was found enlarged, and of the nutmeg character.

*Remarks.*—There is one subject in connexion with the foregoing case which, I think, calls for a few observations. I refer to the strong evidence, and very marked symptoms, of *cardiac disease* that existed during life; the remarkably augmented impulse, more than once alluded to; the increased extent of dulness, on percussion, in the cardiac region; and the well-marked bruit heard over the heart, (all which symptoms became more marked as the case advanced), would, I conceive, have left no doubt on the mind of any Physician that there existed hypertrophy and valvular disease of that organ.

The situation of the aneurismal tumour, however, seems capable, in a great measure, of explaining the cause of these symptoms, for, being placed directly behind the heart, it would tilt that organ forward at each pulsation; and this distension, being synchronous with the heart's action, would cause an increased impulse.

The increase of dulness may be explained by supposing the heart to be pushed forward by the tumour into closer contact with the parietes of the chest, and so displacing, to some extent, the overlapping lung; the bruit must, I conceive, have been conveyed through the heart from the

tumour, as the comparatively healthy condition of the valve renders it extremely improbable that it could have originated in the heart itself.

One other point also demands a word or two. The patient himself attributed the aggravation of his illness to the use of the Turkish bath; and, under the supposition that the case was one of heart disease, this did not seem improbable. During a recent debate in this Society, it was argued that the Turkish bath, by carrying off a large quantity of the watery portions of the blood, rendered it proportionably richer in fibrin; and that on this account it might increase any tendency to the deposit of lymph on the valves, so that the bath was considered dangerous for any person labouring under cardiac disease; and this case had been so frequently spoken of as an illustration of the above theory, that I think it only fair now to inquire whether the bath could have aggravated the disease? and this, in a case of aneurism is, I conceive, not probable; for if the bath be dangerous in cardiac disease, by increasing the tendency to fibrinous deposit, this very tendency (if produced) would be a most desirable object in cases of aneurism; for it is clearly by the formation of concentric layers of fibrin nature endeavours to strengthen the walls of the aneurismal tumour, and even occasionally effects a spontaneous cure. And surely anything that would increase this tendency, ought to be more calculated to assist nature in effecting a cure, than a cause of aggravating existing disease.

*True Thoracic Aneurism; Hypertrophy of Heart; Disease of the Aortic Valves; Albuminuria and Atrophy of both Kidneys; Cirrhosis of Liver, &c., &c.* DR. FINN exhibited Pathological specimens of the above, and communicated the history of the case.

Thomas Cahill, aged 53, a jingle-driver, unmarried, was admitted into the North Infirmary on the 14th December, 1860, labouring under bronchitis and anasarca; the former having commenced about two months previous, whilst the anasarca dated from a later period. His habits have been irregular and intemperate, and he has been under treatment at various times within the last 14 years for syphilis, pain of chest, acute rheumatism, bronchitis, &c. He has frequently fallen, whilst intoxicated, from the seat of his car, and on one occasion expectorated blood immediately afterwards. Has suffered from hip-joint disease from an early period of life, and, in consequence, one leg is much shorter than the other.

*General signs.*—Face pale and œdematous; harassing cough, with copious muco-purulent expectoration; dyspnœa; pains referred to various parts of the body; tongue coated; appetite impaired; pulse wiry and accelerated, the artery, when pressed, communicating to the finger a sensation similar to that produced by contact with a calcified substance;

the urine, on the application of the usual tests, yielded a copious precipitate of albumen.

*Physical signs.*—Visible pulsation of the arteries of the neck; slight prominence of upper-third of sternum at right side; area of cardiac dulness enlarged; dull resonance also perceptible in the course of the ascending aorta and arch; bronchial rales audible throughout the chest; bruit de soufflet heard over the region of heart; and in the course of the ascending aorta and arch, over which latter parts the character of the murmur was much louder. Having remained in hospital for five weeks, he was relieved to such an extent as to be able to resume, for some time, his ordinary occupation. He was re-admitted on the 1st March, 1861, in about the same condition as on the former occasion. The countenance, however, presented in a more marked manner, the *anemic* character so generally observed in connexion with albuminuria. There now existed also marked turgescence of the veins of the neck. On the 19th March, the anasarca had entirely disappeared, and the pulmonary symptoms were also relieved, with the exception of occasional inconvenience from the cough in the morning. He sometimes complained of dysphagia, but did not always refer the difficulty, experienced in this respect, to the same point. In the course of the month of May he suffered from a violent attack of hematuria, which, for several days, resisted the usual treatment, and reduced him to the last state of weakness.

During the months of May and June, the symptoms generally assumed a more aggravated character; hemoptysis occasionally presented itself, and he frequently complained of acute pain, referred to the region of the heart. He died on the 11th July.

*Autopsy.*—Engorgement of the lungs, and effusion in the cavities of the pleuræ. Recent pericarditis; adhesion of heart to the pericardium; the connecting medium being composed of soft plastic lymph, which offered little resistance to the separation of the opposed surfaces. The heart was large, globular in form, and firm in its texture; it weighed 15 ounces. The left ventricle was hypertrophied in a high degree. The aortic valves were opaque, corrugated, and thickened, and presented vegetations at several points. The aorta itself was enlarged and sacculated to near the termination of the arch; it contained, throughout that extent, a coagulum of moderate size, which was partially decolorized. The interior of the vessel was thrown into folds, the middle coat having lost its elasticity; the internal lining membrane was pale, except at the distal point of the sacculated portion, where there existed considerable congestion; at this point, also, the limit of disease was defined by a narrow border of atheromatous deposit.

Cirrhosis of the liver, with diminution of its size, and the usual change of form incident to this disease. The larger of the kidneys weighed 3 ounces and 1 drachm; the other 13 drachms. Both kidneys were

pale, and almost wholly free from any superficial irregularity; but a section of either presented the characteristic pathological appearances usually observed in connexion with albuminuria.

*Remarks.*—The hematuria, which has been already noticed, would appear to have arrested the aneurism in its progress towards the usual termination of this form of disease; and to the same cause, perhaps, if not to the predominance of the white corpuscles in the blood, may be referred the absence of congestion in the interior of the vessel, a condition which contrasts with that habitually observed under similar circumstances. It is difficult to determine the order of sequence which the pathological phenomena observed, with the exception of the pericarditis, which obviously completed the circle of organic change. The co-existence of cardiac with renal disease, in a little more than half of one hundred cases recorded by Dr. Bright, would almost warrant a generalization on this subject. This complication, however, may be regarded as the exceptional case in this locality. Professors Harvey and O'Connor, of this city, who have had opportunities on a large scale of observing albuminuria in hospital and private practice, state that they have rarely seen this disease complicated with heart affection. Professor Osborne, of Dublin, referring to the co-existence of cardiac with renal disease, observes—" This last connexion has been placed in rather a prominent point of view by Dr. Bright. In my cases the two diseases appeared to be combined, only by both being the result of one cause." On the other hand Professor O'Leary, of Queen's College, has seen, at Vienna, the two diseases just referred to combined in the same degree of frequency as in Dr. Bright's practice. Mere meteorological differences would fail to reconcile results of experience so complicating as those adverted to.

*A short Biographical Notice of Henry Pierrepoint, Marquis of Dorchester, some time Fellow of the Royal College of Physicians, London.* By T. W. BELCHER, M.A, and M.B., *Oxon. and Dublin ;* L.K. & Q.C.P. Ireland, and Physician Extraordinary to the Cork Fever Hospital.

Perhaps in no country does the professor of medicine receive so few state honours as in ours : while lawn sleeves, in many instances, clothe the industrious and zealous divine, and the judicial ermine enables the once hard working lawyer "to live at home at ease"—like those comfortable specimens of mortality " the gentlemen of England "—the earnest and learned physician can hope for no further success than to acquire an enormous practice, which, even when made, is ever uncertain; and the very pursuit of it so wears out mind and matter, that of most, it can be justly said, " the weary wheels of life stand still at last." Hence the profession of medicine is very rarely pursued either for love of it or for gain, by the wealthy, and, in our day, never by the nobles. In a late

number of *Notes and Queries*, under the head of "Noble Physicians," appeared a few lines relating to the nobleman above-mentioned. This led me to inquire further into the matter, and, by the kind assistance of my learned friend, Mr. Richard Caulfield—who consulted various works for me in the Library of the British Museum—I am able to lay before you this short sketch.

Henry Pierrepoint, Earl of Kingston, was born in 1606, and was educated at Emmanuel College, Cambridge, where, in due course, he graduated. From early habit he was a studious man, reading for ten or twelve hours daily for many years; and although he appeared but little in the character of an author, yet he seems to have had a great foundation for being so.

Collins, in his *Peerage*, speaks of him as a learned man; and Walpole in his work, *Royal and Noble Authors*, (by Park, iii. 229), quotes Collins at some length to the same effect.

The following publications of his are still extant, viz.: 1.—" A Speech spoken in the House of Lords, concerning the right of Bishops to sit in Parliament, May 21, 1641." 2.—"Concerning the lawfulness and conveniency of their, (the Bishops), intermeddling in temporal affairs, May 24, 1641." 3,—"Speech to the Trained Bands of Nottinghamshire, at Newark, July 13, 1641 "; and 4.—"Letter to John Lord Roos, (his son-in-law), February, 25, 1659."

He was called " the good Earl of Kingston," and was well read in the fathers, schoolmen, casuists, civil and common law, medicine, and anatomy.

For his proficiency in civil and common law he was admitted a Bencher of Gray's Inn; and, for his learning in medicine and anatomy, he was elected a Fellow of the Royal College of Physicians of London.

To the latter society he seems to have been more particularly attached; for he left to it his library of civil law books, the catalogue of which has been published:—"*Bibliothecæ Collegii Regalis Medicorum Londinensis Catalogus*," with an appendix, 8vo, 1757.

Antony Wood calls him " the pride and glory of the college," and Dr. Munk in his learned book, " *The Roll of the Royal College of Physicians of London*," (i. 262—274), lately published, gives an interresting notice of this distinguished nobleman. Wood also notes an elegy, (now lost), on him, by " John Crouch, sometime his domestic servant."

Throughout the great rebellion he was a steady adherent of King Charles I., and attended him at his garrison at Oxford. For his services the king created him Marquis of Dorchester in 1645. He survived the usurpation, and died at his house in Charleshouse Yard, London, December, 8, 1680, *ætat suæ* 74.

If we consider the immense benefits a man of this rank has it in his power to confer on the poor and suffering on his estates, it is wonderful

so few noblemen practice medicine with an enlightened and liberal spirit.
Kings have learned mechanical trades, and statesmen have amused them-
selves with children's games ; but few have played the physician.

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*Occlusion of the Vagina, rendering Penetration impossible, but not obstructing
Impregnation and Child-bearing.* By John H. Houghton, M.R.C.S.
Eng., &c., Surgeon to the Dudley Dispensary.

The perusal of Mr. Chance's interesting paper on " The Total Destruction
of the Penis not a Cause of Impotence,"[a] has induced me to send the
following record as a kind of corollary to Mr. C.'s case :—

Whatever doubt may arise in the mind in reference to the veracity of
the statements made to Mr. Chance, and consequently of the truth of the
position he maintains, that destruction of the penis rendering penetration
impossible, is not a positive obstruction to impregnation, there can be
none in my case of the fact that occlusion of the vagina rendering pene-
tration beyond all question impossible, is not an absolute obstacle to
impregnation and child-bearing.

In reference to the point at issue, my case very much resembles the
two cases quoted by Mr. Chance. It has, however, much interest in an
obstetric point of view, on which I offer no remark now. I publish it
simply in reference to the subject of Mr. C.'s paper, transcribing my
notes without further comment.

Mrs. A., aged 25, one of the finest grown young women I ever saw,
came under my care at the dispensary in the early part of 1858, on
account of a train of symptoms clearly indicating something wrong in the
genital organs. She had been under the care of several medical men
previously, but they had not directed attention to these organs. After a
little palliative treatment, I proposed an examination, which was readily
assented to. On separating the labia I was surprised to find the progress
of my finger arrested by a dense membrane, and on passing it backwards
towards the anus, I could not find any opening into the vagina, but on
passing it forwards towards the urethra, I discovered, close under the
arch of the pubes, a small orifice, with the most firm and rigid edges
posteriorly, and through this orifice I found it quite impossible to pass
the tip of my first finger, which is very small. In fact, the vagina (with
this exception) was completely closed by a dense cicatrix situated at its
orifice, so that the finger could not, at the most, be passed more than
an inch between the labia, so completely was the passage closed.

[a] Vol. xxxii., p. 39.

On inquiry, I found that she had had one child before, and had been attended by a midwife, who had allowed the head to remain "*half born*" for more than twelve hours. She slowly recovered, suffering great pain, and having a profuse discharge from the vagina. She did not consult any medical man, being satisfied with the assurance of the midwife that all was right.

When she got about, she found that the functions of the parts could not be performed as before. She went on for some time, hoping things would get right, but at length consulted some medical men, who gave her no idea of the nature of her complaint, nor did they propose any examination.

I gave her some medicines, calculated to improve her general health, which was much impaired, and also to gain time to think over the case, and to decide upon what was best to be done, when, one day, she came to the Dispensary, and told me she thought she was pregnant—and this suspicion soon proved to be true. I now determined to wait till labour came on—see what nature would do—and then deal with her condition as circumstances arose. Labour commenced on the 29th of September, 1858, at 9 p.m., and I saw her on the following morning at 11. The pains had then been sharp for some time—so sharp, in fact, that before I could get there (two miles distant), a midwife and Mr. Meredith (who lived near) had been summoned. On examining, I found the stricture sufficiently dilated to allow me to pass my first finger, as far as the second joint, with which I could feel the posterior fontenelle through the os uteri, which was dilated to the size of a five shilling piece; the membranes were ruptured; the pains were regular, and tolerably strong. I left her for a time, Mr. Meredith kindly offering to see her frequently, and send for me if anything happened. I saw her again at 10 p.m. The pains had continued; countenance good; skin cool; urine passed freely; pulse 96, full and soft and regular; tongue clean and moist; no thirst; bowels opened; head lower down, pressing on the cicatrix; the orifice admitted the finger freely. I remained with her an hour, and during that time dilated the orifice so far, that I could readily pass three fingers through it, though the margin was thick and very rigid then. I again left her, Mr. M. promising to keep his eye on her and send for me if necessary.

At 2 a.m., the pains had become so strong and the anxiety of the patient and her friends so great, that Mr. M. sent for me. I was, however, engaged at another labour, and did not arrive till 5 a.m. There was very little increase in the dilatation of the cicatrix, if any; though she had had hours of violent pain, with the head pressing firmly on it, and part of the scalp protruding through the orifice; countenance good; skin cool; pulse 96, regular, soft; urine passed; tongue moist; not much thirst; bowels opened by oil which I ordered last night; she

was very cheerful, and bore her pains admirably; the cicatrix very rigid.   At 6·30 a.m., as no progress had been made for some hours, and the cicatrix remained as rigid as ever, I made two small incisions through it, one in the direction of each sacro-iliac synchondrosis.   The pains continued, but not so strong or frequent; dilatation, however, went on, and the head descended.   At 9 a.m. I found the progress still obstructed by a very firm band of cicatrix on the right side, which had not been sufficiently divided.   This I again incised pretty freely where it seemed to offer the greatest resistance.   No bleeding of any consequence followed the use of the knife, and the operation *did not cause any pain at all.*   The dilatation now went on well, and the cicatrix did not offer any further obstruction of importance to the descent of the head.   At 11 a.m. the head had made but small further progress, the pains were becoming less strong and less frequent, and the patient had become very anxious for delivery to be accomplished.   Pulse 120; considerable feverishness. The head also seemed firmly fixed in the pelvis.   Considering these circumstances, and the history of her former labour, I now determined to deliver by the forceps.

I commenced the operation at 11·10 a.m., and applied the blades without any difficulty.   The head, which was found to be rather firmly fixed, was soon released, after which I almost allowed nature to complete the delivery, which took place at 11·45.   Whilst I was attending to the child, which was born asphyxiated, Mr. Meredith removed the placenta.   The uterus, however, contracted badly, and violent flooding came on.   Pressure soon contracted the uterus, but it was not firm, and not near so small as it should be, and, as the flooding continued, I introduced my hand and removed some firm coagula and a small piece of the placenta which had been left.   The uterus was still disposed to relax, and the flooding to recur, and, in fact, did return sharply.   Grasping with the hand and the cold douche to the vulva and the hypogastrium, brought on firm contraction of the uterus, which was maintained by pressure and the bandage, and no further flooding took place.   Two grains of opium were now given, and in an hour I left her composed, cheerful, and disposed to sleep, pulse 120.   The child was resuscitated by half an hour's application of the " ready method," after the warm bath, artificial respiration, and cold sprinkling had failed to produce any decided effect.   It is now alive. Details of her progress are unnecessary, and would be tedious; suffice it to say, that she made a good recovery.   But all my efforts to prevent a further contraction were abortive to this extent, that when I last examined her, I could only pass two fingers through the orifice, as far as the second joints.   She was perfectly restored to health.   She miscarried since that labour; and, on 22nd November, 1861, was again confined at the full period.   The orifice of the cicatrix admitted four fingers; but required slight incisions to be made into it to permit the head to pass.

*Case of Reducible Inguinal Hernia—Radical Cure performed according to Wood's method.* By W. COLLES, F.R.C.S.I., one of the Surgeons to Steevens's Hospital.

Patrick M., aged 28, admitted into No. 1 ward the 27th November, 1860. For about two years he has been labouring under an inguinal hernia of the right side ; it has become very large, and he finds great difficulty in retaining it in the abdomen ; he has tried several kinds of trusses, but in vain, and as he can not follow his laborious occupation, (farm labourer), he is anxious to have something done for it ; he would run any risk to avoid being thrown out of employment.

The hernia was large, easily reduced, the ring and canal both much dilated. Having just then studied the plan proposed by Dr. Wood in the *Medico Chirurgical Transactions* for the relief of this infirmity, I resolved, with the consent of my colleagues, to try it.

The man was placed under the influence of chloroform, I then made an incision into the scrotum and loosened the integuments around, I passed the index finger of the right hand into the ring, carrying on it the inverted sac, till I felt the border of the transversalis muscle. With the left hand I passed a very curved needle armed with a strong hempen cord to that point, and while an assistant drew the integuments up I pushed the needle through all the parts. Leaving the loop, I withdrew the needle on one end of the ligature, which I passed through the outer wall of the canal, and then passed the remaining one through Poupart's ligament. I could not pass all through the same opening, as recommended. I was obliged to have two openings in the integuments, about the eighth of an inch apart. I then crossed the ligatures and tied them across a piece of wood. For three days after the operation he suffered considerable feverish disturbance, and pain in the region of the wound, but as the pain did not extend entirely over the abdomen, and as his bowels continued to act, I judged general peritonitis had not set in. I therefore allowed the ligatures to remain fixed for eight days. On loosening them and removing the piece of wood there came away a considerable discharge of rather fetid pus. In two days more I removed the ligatures, and found I had to use considerable force in removing the outer one. The abscess continued discharging for a week, then gradually closed, and all bad symptoms disappeared. When the swelling had subsided he was provided with a truss and allowed to return home.

November, 1861.—He has now applied at the hospital, one year after the operation. He has been wearing the truss ever since, till about three weeks ago, when the spring broke. He now applies for a new one. He says he never feels any inconvenience, or saw the slightest appearance of the rupture, but he would not like to go without the truss.

The above case I consider as a case of cure ; although the man fears

to go without the truss, still the hernia has not made the slightest protrusion since the operation, and for some weeks he might as well have had no truss as the one he has at present. How far the operation may be justifiable requires further experience.

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## On Aphonia in Tuberculosis of the Lung.   By PROFESSOR MANDL.

In opposition to the ruling and apparently well-founded opinion, that the alteration of the voice occurring in the course of tuberculosis of the lungs, is due to a local disturbance (catarrh, tuberculosis of the larynx) Mandl puts forward another view. He says these changes are not always the cause of the anomalies in the formation of the voice, which may rather be looked upon as functional disturbances of the recurrent nerve. Division of the recurrent nerve in animals gives rise to aphonia, difficulty of breathing, and closing of the glottis, so Mandl considers that the aphonia in the course of tuberculosis is caused by the infiltrated upper portion of the lung and the bronchial glands pressing upon the nerve. This aphonia accompanies tuberculosis of the left side seldomer than of the right. The recurrent nerve of the left side, passing between the trachea and œsophagus, is more protected from pressure than on the right side. In children, before the fourth year, the alteration in the voice is very rare, not frequent before puberty, and more rare in women than in men. The first of these facts Mandl tries to unite with the statement of Lanzet—that in young animals the section of the recurrent nerve is not followed by aphonia; the rare occurrence in females is explained by the larynx being more like that of a child than that of a grown man. After section of the recurrent nerve, or compression of it, fatty degeneration and atrophy of the internal muscles of the larynx set in, this Mandl ascertained on the dead body. By laryngoscopic inspection on the living, paleness of the mucous membrane, and limited mobility of the right vocal chord were observed. (*Jahrbuch*, 1861, p. 90).

# In Memoriam!

## 1858, 1859, 1860, 1861.

IN MEMORIAM! But the last tribute of the noisy living, to the dead great ones gone from among us across the vast and unknown sea! But a short requiem murmured o'er the grave ere the fierce din of life deadens the mournful chaunt! But a few flowers, sprinkled by the hands of fellow-workers, ere comes the rush of men and of events to trample them down into the yet fresh earth. In Memoriam! Though now a present and a national grief cries for a hearing, as Death is reaping near the throne. In Memoriam of our best and greatest; though the tracings of memory be dimmed by the tears of a country's loss, and all that is simple-minded and of generous heart subdues its private grief in sympathy with royal woe!

Saddening and solemn though it be to hear read out the muster-roll of Death, there is a pride in the names of these dead ones that robs our grief of half its bitterness. Nor is this chequered sorrow the sole and simple feeling that guides the recording pen in its attempt to trace the lives of such worthies, and point the moral they bequeath. The epitaph on the tombstone is not so much a tribute to the dead as a reproach to the living. It is present penance for forgetfulness that must come—for the oblivion, which as the golden sands drop from the glass of time, will most certainly submerge those who have established the strongest claims on the world's regard.

Is it the fault or solace of our nature that memory clings at best but feebly to the image of those with whom living we were most familiar, whose company we loved, whose thoughts were springs of our own actions, and whose language coined the issue of our minds? Is this a reproach to nature, and should we from it read the lesson that noble deeds and lofty lives are profitless and vain; or is such a reflection pregnant with a nobler and a higher import—a steadfast hope in other than man—the trust in a remembrance of good works recorded in a higher sphere? Were it not for this secret and this constant faith, whence could spring the ceaseless energy and steadfast purpose with which the disciples of our art struggle with disease, often against treachery from within and discouragement from without, knowing their efforts must at best be tentative, will mostly be met by ingratitude, and, frequently unseen, will of necessity be without reward. Who, disen-

chanted by such knowledge, by such knowledge as Time alone supplies, dispelling at last and for ever, the fairest and purest of youth's bright visions, would seek today ote his life to medicine, if it were not for this trust, and the splendid examples of the working in that trust that Death now places before him?   For his science, could he foresee it, must, though success wait on his steps, minister, most probably, more to the vices than the misfortunes of men.   His life, so devoted, must be one of constant trial. Deficient in energy he must fall by the way; nor are there any of those convenient havens on the road that offer themselves to the weak of the sister-callings.   Without ability his labour is but labour in vain, for no field so peremptorily requires at all times for its cultivation, a readiness of the faculties, a power of decision, and a courage for responsibility.   Sensitive by nature, he must ever feel acutely not only the sufferings he gazes on for his bread, but the imperfections of the art he employs for their alleviation. He, perhaps, may never see the beauties of a science so shifting and inexact as Medicine.   He must journey always in obscurity, mostly in danger; and unless animated by the highest motives, can never cease to despond.   Deficient in means, he must fight without weapons: and not only must bear his wounds with fortitude, but must hide them if he hope for mercy.   Not only must he run the gauntlet of life, but for him there is no escape if he even utter a cry.

When will the lust of gold be stayed?   When will satiety of power pall on men, that truth and purity may shed their radiance, and where they fall, be blessed?   When will the world's vision cease to view all things through gold's glary glory, and see the beauteous sunshine on the work with heaven's blessing?   When will " Love thy neighbour " cease to be a mouthing, and those who act upon the law, rank though with naked feet, above the high in title and in place?   When will wisdom take precedence of rent rolls, and the pale beauty of christian practice beam upon a calmer sea of hushed and human passions?—that what is good may no longer be great by chance, but by desert; and what is virtuous in action astonish the world no longer when wedded with success?

But let us beware, lest the recollection of not one only whom death here links with his rarer brethren, but of others whom contrast with the examples before us conjures up, lead us to lay too much upon the world and too little on ourselves.   Grievances are mostly the comforts of the weak; and in pointing to the exceptional successes of men even of the highest merit, we should not charge the world with an obliviousness of benefits it never knew it had received, and a disregard of merit it was unable to appreciate.   For the world is a noisy world, and withal exceedingly busy.   It has scarcely time to seek out merit obscured by its own modesty.   It is unable to decide on matters of abstract acquirements, and on a skill remote from its own experience. And not unseldom, must we confess, that when the world calls upon

us for a choice, we are found to be doubtful of our own champions, and frequently engaged in reviling our idols. Success is so rare, in the social point of view, that those who can assist one fortunate to attain it, would be more than human if they lent their aid; and dissatisfied with ourselves for characteristics that the world loves not, we may possibly blame for its coolness, the regard we ourselves have deprived of its warmth.

The very character of the medical mind sufficiently accounts for the rareness with which Medicine is bidden to a share in the honours the world can bestow. Congenial in private life; leader in social progress; foremost in acts of charity and of mercy; the practitioner in medicine thrown into public life is at once unsuited and out of place. With a youth given to studies of an inexact character, his views present none of that distinctness that satisfy the reason; nor are they enunciated with that vigour and charm that only those trained in exact science can acquire. The highest functions of the mind are given to analysis. The greatest cultivation is bestowed on the senses. Consequently, though he can please, he can seldom control or create; and though he may be esteemed for his varied knowledge, he is seldom sought for the solidity of his powers. Perhaps no medical man was ever feared; perhaps but few who are not widely respected. But to achieve the success we allude to, there is nothing more fatal than reputable benevolence. For the world gives nothing to goodness in the abstract; and perhaps it is more to be pitied than blamed, that its rewards are sought from it by daring rather than desert, and obtained through its fears rather than its gratitude.

If this then be no prejudiced glance at the various causes which operate to the exclusion of so many from success and honours, that similar application and integrity would insure in other walks of life, it may fairly be assumed that success in medicine, in the full and worldly acceptation of the term, necessitates the highest endowments and capacity, and when obtained, is in itself proof of their possession. Nor weighing that success with the merits of the man, can any stronger evidence be found in the history of the profession at all times, than presents itself spontaneously in the person of Sir Philip Crampton.

Foremost among men of whom Irish surgery is proud—singularly gifted by nature, and favoured by good fortune—SIR PHILIP CRAMPTON stands out forcibly as the brightest ornament of the profession he adorned.

The family from which Sir Philip descended, originally migrated from South Cottingham, Notts, and settled in Ireland in the reign of Charles II. Sir Philip was born in Dublin; was apprenticed to Solomon Richards; and saw active service, as staff assistant-surgeon, at the invasion of the French in 1798. Appointed surgeon to the Meath Hospital before he had completed his twenty-first year, and even before obtaining his diploma, Philip Crampton began practice in Dame-street. Finding—and, no doubt, not to his surprise—that practice at so early an age did not

flow in with great rapidity, Crampton, in conjunction with Peter Harkan, who took the anatomical department, established the first private school of anatomy and surgery in Dublin. He himself lectured on physiology, pathology, and surgery; and the increase in his practice, which had become encouraging, happened at this time to be materially assisted by the accident that befel the waiter at the Richmond Tavern, opposite Sir Philip's house in Dawson-street. The emergency was likely to have proved fatal; and Crampton got much commendation for the readiness with which he proved himself equal to the occasion by performing tracheotomy.

At the time of the death of Mr. Stewart, Philip Crampton had become chief surgeon to the Lock Hospital. He resigned this on receiving from the Duke of Richmond the appointment of Surgeon-General to the Forces in Ireland. He became Surgeon-in-Ordinary to the King; and was made a baronet by her present Majesty in 1839.

More perhaps than most men, and certainly at any one period of his life, more than most men of his age, Sir Philip Crampton enjoyed life. Nor is it saying too much to affirm, that at the age at which the appetites and faculties usually decay with failing nature, Sir Philip's animal spirits were at their highest, and his pleasure in living most intense. With him, life itself was an enjoyment which acquired but little additional zest from the appliances of modern luxury. He was passionately fond of athletic and out-door exercise. He was a first-rate rider, kept his own pack of hounds, and seldom missed a day's sport when in the height of his practice. His senses consequently partook of such acuteness, and his perceptive powers were so vivid, that these in themselves enabled him as it were to dispense with intricate processes of thought, in forming a swift and correct conclusion in any case that came before him. His diagnostic powers were unrivalled. Disease was to him not so much a puzzle as a picture, for the very difficulties of a case were to him but so many features. With him surgery was not so much a profession as an instinct. He operated consequently as a master. His boldness never partook of rashness; for his experience had been unequalled, and his knowledge of anatomy was profound. He could consequently arrive at results in a less time than most men take to lay down their premises. But let no one entertain the vain thought that the possession of even such gifts as those with which Sir Philip was endowed, can achieve a like reputation, and a success as glorious, unaccompanied by the keystones to this admirable character—industry and perseverance. For forty years Sir Philip worked unremittingly in the wards of the Meath Hospital; nor did the unceasing claims upon his energy, of both his public and his private practice, prevent him from carrying on with ardour those literary and zoological pursuits in which he excelled. His essays and papers are to be found in profusion, in all the medical periodicals of the day. His discovery of the *Musculus Cramptonianus* by which the eyes of birds are

accommodated to the different distances of objects, obtained his election into the Royal Society; and his abstract scientific acquirements were such as ensured his repeated re-election to the President's chair, both at the Zoological Society and the College of Surgeons.

In every sense of the word Sir Philip Crampton was a gentleman; and on his claims to that title alone, would have achieved a name, without the aid of his profession. His tastes were elegant: his manner, in the highest degree courtly and fascinating. Of commanding form, and rare beauty; of noble nature, and fearless disposition; he displayed at once a merit too signal for detraction, and compelled an admiration too deserved for envy. For eloquence he had no rival in the profession. His ornaments were chaste and felicitous. His method of arrangement such as presented the most complicated subjects, at once in a lucid and attractive form. But what, perhaps, tended mainly to place him in his elevated position, and to maintain him where others, from the inconstancy of the great or failings of their own, must have descended, were his social qualities and conversational powers. His language was copious, and well chosen; his style pleasing, though emphatic; his fund of anecdote and raillery inexhaustible, and inoffensive. His own feelings were too sensitive to admit his giving pain to others; nor could the least of his admirers allege, that his humour, which was great, and his sarcasm, which was powerful, had ever been employed to ridicule the weak, or to deride sacred things.

The bust of him by Moore, in the theatre of the Meath; the crowds that followed him to the grave; the reverence with which his name is still mentioned; evidence the deep affection Sir Philip had inspired among all classes.

The "*Dublin Dissector*" has perhaps done more to further a knowledge of practical anatomy than any other work that ever issued from the press. On the ground of its authorship, therefore, ROBERT HARRISON is deserving the sincere and lasting respect of his professional brethren; a tribute they will, moreover, pay willingly and with regret to the author of the *Surgical Anatomy of the Arteries*, and his classical contributions to the *Encyclopedia of Anatomy and Physiology*. Surgeon to Steevens's Hospital, Professor of Anatomy in Trinity College, to which he had been translated from the College of Surgeons, an excellent lecturer, an honourable man, and a staunch friend, Harrison was snatched away, prepared by his blameless life, indeed, but not by the warning he received. He was heard at the hospital in the morning to express a wish he might die suddenly, and not by such a lingering death as Sir Philip's. During the night he was seized with apoplexy, and next morning was no more.

Unappeased by the victims from our ranks in the year 1858, nor content to wait for the hecatomb of 1860, Death took from among us, in

December, 1859, one to whom obstetric medicine is no little indebted for its present dignified position in Europe. WILLIAM FETHERSTON H MONTGOMERY died on the 21st of December, at his house in Merrion-square. His reputation had extended and raised the credit of Irish midwifery wherever scientific medicine had cultivators throughout the world. Nor was that celebrity at all incommensurate with his local fame, the extent of his abilities, and the blameless character of his life. With indomitable energy, with profound transcendental knowledge, and possessing a rare acquaintance with the science of embryology as cultivated by the German school, Dr. Montgomery at once was the most lucid expounder, the most skilful practitioner, and the most advanced cultivator of his art. To his unaided abilities he owed his success; to his energy, to his devotion to science, and to his disinterestedness, his survivors are indebted for the Obstetric Museum, which owns no superior in Europe. Extensive as it is, the collection formerly in the College of Physicians, and now enriching Queen's College, Galway, was the work of his own hands; nor could the unceasing duties of most extensive practice, or the advance of years, prevent him from adding to the collection up to the latest period of his life. His career was precisely that which might have been predicated from his youth. He entered Trinity College, Dublin, in the year 1817, and there received a scholarship, bestowed only upon those who, like himself, displayed rare classical tastes and acquirements. To these, abiding with him through life, may be referred that pleasing style of delivery which made his lectures so popular, and the lucidity and grace which gave them so rare a value; and the same elegance of idea and happiness of expression, may be abundantly observed in his classical work *On the Signs and Symptoms of Pregnancy*, which, though it was not needed to extend his reputation, has certainly served to place it beyond dispute. Of equally signal merit, and, perhaps, of greater originality, are his observations on the Spontaneous Amputation of the Fetal Limbs in Utero, which alone would entitle him to the first position in the walks of science, even without the additional fame that justly attaches to the author of " Personal Identity," and " Succession of Inheritance Legitimacy" in the *Cyclopedia of Practical Medicine*; contributions which, from the learning and power of grasping and harmonizing facts that they abundantly prove their author to possess, are worthy to be placed among the most valuable monograms in this or any language. Enjoying a most extensive and lucrative private practice, Dr. Montgomery attained the highest dignities his profession could bestow. He was a Fellow of the College of Physicians as far back as the year 1829, but he did not proceed to the degree of M.D. until 1852. He was also elected President of the College, and held the Professorship of Midwifery for thirty years, worthily fulfilling the duties of the post, whose institution was due to his early exertions.

Snatched away, like Harrison and Montgomery, while busy at his post, HENRY MARSH now claims our sorrowing mention. To many there are given intellectual and moral powers which permit their possessors, if the coast be but clear, to steer through life without shipwreck; and which, if not enabling them to surmount unwonted dangers, at least prevent them courting unnecessary disaster. But few men possess that strength of will and that clearness of moral vision which in emergency endow them with forethought, and, nerving the hand to seize the helm with unflinching grasp, render their trials and their perils subservient to progress. But of such a rare combination was the man who filled for so many years, so prominent a position among the physicians of his time. At 12 years of age he was destined by his father, the rector of Killinane, to agricultural life; and, until 15 years old, his studies were entirely directed to corresponding pursuits. In 1806, however, being then 16 years of age, his ambition was excited by a chance companionship with a stranger, a Fellow of Trinity College. He abandoned his rural occupation; and at 17, entered the University of Dublin—firstly under the tutorship of the present Right Hon. P. C. Crampton, and subsequently under that of the Rev. Dr. Sandes, afterwards Bishop of Cashel. His views were for the Church; but having about this time become strongly impressed with the religious tenets of the celebrated John Walker, he determined to enter upon the study of surgery instead. His design was to serve in the Peninsula; and acting upon the advice of his cousin, Dr. John Crampton, he became one of the pupils of Sir Philip. He happened, however, to wound the index finger of his right hand, and the subsequent loss of a portion of it, compelled him to modify his plans of practice. In 1818 he graduated in medicine, and took the licentiateship of the King and Queen's College of Physicians. In 1820 he was appointed to the vacancy in Steevens's Hospital, created by the promotion of Dr. John Crampton. He was one of the original promoters of the then medical school in Park-street; and, in 1827, succeeded Dr. Whitley Stokes in the lectureship on the practice of medicine to the College of Surgeons. This appointment, from the extent of his private practice, he was compelled to relinquish in 1832. Made Physician-in-Ordinary to the Queen in 1837, he received a baronetcy in 1839. He became President of the College of Physicians in 1840, and Senior Physician to Steevens's Hospital in the same year, on the death of Dr. John Crampton, his old relative and friend.

So singularly unchequered a career of prosperity, succeeding to a youth whose education and whose plans had been as signally shifting, points at once to the adaptive genius of the man and the inherent vigour of his nature. Matured by the experience he soon acquired in the discharge of duties under which a less determined mind must have succumbed, Sir Henry Marsh made those valuable endowments subservient to inductive medicine with a facility and success to which the only parallel can be

found in the practice of Robert Bentley Todd. In the pursuit of pathological knowledge ; in the tracing the causation of morbid processes to an ultimate fact ; in the endeavour to reconcile the clinical features of disease, Sir Henry Marsh was alike zealous and successful. The confidence he felt in himself he inspired in others ; his rise consequently was as steady as it was rapid, and when secured was as firmly maintained.

His moral was his incentive to action. His trust and his faith the measure of his success. Believing in the dependency of result upon cause, he aimed not so much to succeed as to deserve. Not limiting his belief to the restricted area of the senses, with no narrowed view of labour and of thought, he was impressed earnestly and stedfastly with the beneficence of design, and the justice and right of things as they are. Having no scepticism he had no mistrust, but used gratefully, and with confidence, the means nature placed at his disposal. His work was consequently worthy even of the highest intellect, and was stamped with a beauty that graces but seldom the fruits of even greater learning and genius. Knowing he did his best, and knowing by the light that was in him that that best was good, he was at once prompt in his theory and self-reliant in his practice. For to him labour was support independent of praise ; nor could applause add any thing to the silent pleasure in doing good and in mitigating suffering, he felt as a Christian Philosopher.

Sir Henry Marsh was of good family—no small advantage to a man whose professional success, as in medicine, depends so intimately on his social qualifications. His ancestors originally resided in Gloucestershire, one of whom, Francis Marsh, afterwards Archbishop of Dublin,[a] settled in Ireland, and died in 1693. Sir Thomas Molyneux, the first medical baronet ever created in Ireland, was one of his maternal ancestors. The prestige of his name Sir Henry did not suffer to deteriorate by any lack of courtesy and hospitality ; but by the free display of these virtues in his own person, and on all occasions, he mainly contributed to invest the Dublin School of Medicine with a social reputation in no unworthy harmony with its deserved scientific fame.

Sir Henry Marsh freely indulged those literary tastes which to him were so congenial. He was a prolific author, and the extent and variety of his communications to this Journal, are themselves abundant testimony to his exceptional powers and attainments.

On the 1st December, 1860, Sir Henry Marsh was on the point of leaving his house a little after nine in the morning, when he was seized with vertigo, and, falling, fractured a fibula. On the same day, at seventeen minutes to one, he expired. His remains repose in Mount Jerome Cemetery, having been followed to the grave by a larger concourse of mourners than had been present at any interment in Dublin for many previous years.

[a] Founder of Marsh's Library.

No school in Europe, of a surety, ever sustained such grievous losses in so short a time, or furnished death with such illustrious victims, as the Dublin School of Medicine during the last twelve months. Long indeed will Steevens's and the Meath remember the fatal cycle which robbed them, not only of their leaders, but of those who stood next to replace them. Scarce had the sorrow for Sir Henry Marsh begun to lose some of its poignancy, than death, restless and insatiate, seized upon that brilliant and eloquent man, whose talents and whose energies had made the name of Porter respected, wherever scientific surgery owned a footing.

Classical as a writer; brilliant as a lecturer; earnest as a worker; and excellent as a man, WILLIAM HENRY PORTER was one of the brightest ornaments of which the Irish Medical Profession can boast. His classical acquirements—stamping every page of his work on Aneurism, of his book on the Larynx and Trachea, of his Essays on Syphilis, and of his Lectures on Inflammation and Lithotomy—had mainly contributed to his brilliant academical successes when a student in Trinity College; and the fruits of the cultivated training he had received in early life, displayed themselves at maturity, undiminished by any loss of that remarkable energy which had early been one of his chief characteristics. Having entered upon the active duties of professional life, this vigour of purpose was in itself sufficient to achieve for him the reputation, which as long back as forty years, attached itself to the operator who had successfully applied the ligature to nearly all the larger arterial trunks. Of so vigorous a turn of mind, it is not astonishing that William Porter should soon have made himself conspicuous for the daring of his operations, attended, as they were, by singularly happy results. The particulars of his attempts on the innominata artery and its fortuitous issue, are long since familiar to the student of a special department of surgery. The patient had an aneurism of the innominata. The operation was complicated by circumstances of peculiar difficulty. When the artery was exposed it was found to be atheromatous. The ligature was, consequently, not applied, but the irritation set up eventually led to consolidation of the aneurism. Since then analagous steps have, in other hands, led to cure of aneurism in the subclavian. One of the last operations of Mr. Porter was the ligature of the femoral artery, at the upper part of the triangle; and the particular advantages of the incision being made parallel to Poupart's ligament, as was done on that occasion, are described in our sixtieth number, by his, son, Mr. George Hornidge Porter.

An earnest man, William Porter had strong opinions. But as he was a thinker, these opinions were sound; though, as he was strikingly original, they were not always readily received. But as he had worked for them and always conscientiously, he was not the man to give them up. He defended them always with keenness and clearness; but though, from his thorough spirit of independence, he would not hesitate to crush

a formidable antagonist, yet, never did he disdain to remove even the
simplest difficulties that beset the most youthful of his students.

Something of the manner, and not a little of the social success of
Sir Philip Crampton, descended to his favourite pupil, FRANCIS RYND.
" Dear Frank," as Sir Philip and his intimates used fondly to call him,
held, like his master, a surgeoncy at the Meath Hospital, and, in
compliance with the last request of Sir Philip, encased, with his own
hands, his body in cement. Francis Rynd enjoyed a large public and
private practice, and a social position altogether unequalled. The first,
in the wards of the Meath Hospital, extended over twenty-six years ;
and, though scarcely securing for him a scientific position commensurate
with his social status, procured him a fame of a high character, and most
assuredly deserved. Shrewdness, and a turn of mind eminently practical,
are but seldom associated with habits and methods of thought, admitting
great literary distinction ; nor do we find that any exception to this can be
found, either in the work of Francis Rynd on Stricture of the Urethra,
or in his contributions to this or other journals, some of which, notwith-
standing, were in progress at his death. But his operative skill was
perhaps of so high an order, that it would fairly have graced a rarer
scientific zeal, and information more extended and profound. Francis
Rynd was tall and of aristocratic appearance ; his head was remarkably
intellectual, and his brow noble. His manner was dignified and attractive,
and by the sick bed, most affectionate and tender. His patients were,
without exception, his friends ; for his tact and delicacy, in truth, were
admirable ; and, considering how rare and how indispensable are these
requisites to social success, it is not surprising that, conscious of their
possession, he should have aimed at a celebrity more local than extended,
and a reward more practical than conspicuous. Francis Rynd knew his
profession well, but he knew men better. Yet he was no selfish man.
He was offered, both by Lord Eglinton and the present Vice-Roy, many
opportunities for profit and advancement, which would have tried, very
severely, one less disinterested. But he resolutely declined to profit by a
regard won through professional intimacy, and set a noble example to
not a few of those who admired him the least. For work that was not
to be done Rynd may have been unsuited ; but no man could do better,
if so well, the work which he had to do. He estimated rightly the value
of ties between person and person, though he might often be charged
with riveting these at the cost of professional intimacy. Yet we should
hesitate to say he was unwise to value the worldly wisdom so peculiarly
his gift, or to strive but little for an admiration labour only could elicit,
at the cost of an affection his character so signally compelled.

Fortunate like Sir Philip in his life, more fortunate than he in the
manner of his death, Francis Rynd, respected by his colleagues, and

beloved by his friends, received in the grave the best tribute to his merits
—the unrestrained tears of the noblest who followed him. To these his
admirers may at least point in evidence of the power he possessed to
secure the confidence of his patients, and of the loyalty with which that
confidence was invariably preserved.

Among those grouped around the death-bed of Sir Henry Marsh,
prompt at the call of suffering, and eager to solace the last moments of
their professional brother, stood the Nestor of Irish surgery, destined
soon—and how speedily?—to follow him on his long journey, and in
like manner, to be mourned by the many who had benefited by his skill,
and profited by his example. That skill was profound. That example
was indeed brilliant. But it cannot be said that the ability of JAMES
WILLIAM CUSACK was enhanced by the charm of eloquence, or that the
wisdom of his precepts was rendered more impressive by the attraction
of his manner.

Descended from an ancient family, James William Cusack was
admitted at the College of Surgeons in the year 1812. He had pre-
viously obtained a Scholarship in Trinity College, and, on taking his
degree, a classical gold medal. He was early appointed Resident
Surgeon to Steevens's Hospital, and subsequently, to the Surgeoncy of
Swift's. In 1850 he took the degree of M.D. in the University of
Dublin, and in 1852 was elected to the University Professorship of
Surgery, founded in that year. He was three times President of the
College of Surgeons, and, on the death of Sir Philip Crampton, was
made one of the Surgeons in Ordinary to the Queen.

He was great without seeming to be great, and, we believe, without
knowing he was great, for to the last he could never overcome a nerv-
ousness which amounted almost to infirmity, and which his assumed
brusqueness of manner could but imperfectly veil. "It was not," said
he, speaking to the Editor of this Journal, in allusion to his abandonment
of operations, "that my hand is not steady," and he held it out, being
then more than three score and ten years old, as firm and as steady as it
had ever been, "but I am so anxious, before operating, that I feel the
strain too much for my system. You will be surprized," said he,
"when I tell you that from my first to my last operation, I have never
been able to sleep the night before, but lay thinking how I should
operate, what difficulties would arise, and how I should meet them."
Lecturing, this nervousness was obvious enough, but few would have
observed it when he handled the knife. Then, he seemed possessed of
the calmness of a master. Prepared for every emergency, his internal
resources under perfect control, he left the observer in admiration, not
more at the skill of the performance than at the power of adaptation he
displayed. One living surgeon—and perhaps only one—to whom the

spurting from the posterior tibial has been the signal for amputation with the same sweep of the knife, can, in this rare faculty, compare with James William Cusack. And inasmuch as this faculty essentially consists in the power to compel the mind to ignore its previous workings, and urge the hand to a fresh plan, so it is associated with the art of forgetting spontaneously what may have been unfortuitous, and which, if shown to be remembered by the operator, will never be forgotten by his audience. Though cautious, yet bold; though desirous of aiming more at excellence, safety, and completeness than at daring, rapidity, and effect, he was once tempted to a display which might have affected him injuriously, had he not possessed this admirable instinct of readiness and self-command. " I was operating once," he said to us, " on a case of stone. They were all there, Crampton, Peile, and so on, and they must needs time me. I cut into the rectum there and then. But they didn't see it *and I didn't tell them.* But notwithstanding all the patting on the back I got, and what a fine fellow they said I was, you will never see me operate when I'm timed again." And though the man recovered, Dr. Cusack never got over his dislike of being timed, nor would he allow himself to be minuted if he had a suspicion it was being done.

Though his fame was so universal, his ability as a writer was not commensurate with his skill as a surgeon. Of his deficiencies in this respect, as in speaking, he was himself well aware, and often indeed did he express his regret, in conversation with his intimates, at having omitted to remedy his want of readiness and fluency. It is remarkable, however, that he was himself accustomed to attribute a great part of his subsequent fame to his paper on the Extirpation of the Lower Jaw; but, as is not uncommon with men of great abilities, he may have assigned undue importance to those powers in which his excellence was least marked.

Though a great and most successful operator, Dr. Cusack was one of the staunchest advocates of conservative surgery, and regarded operations as the opprobia rather than the glories of his art. Yet he owed no small measure of his success to his operation on the carotid. The patient was a man of note, who had been wounded by a bullet in the neck, at Tipperary. He was dying from hemorrhage, when Cusack saw him, and at once cut down on the artery and tied it. The patient recovered; and, as in the similar emergency of Sir Philip Crampton, the practice of the operator rapidly increased from that time.

As a lithotomist James Cusack was eminently fortunate. He operated for stone 65 times, and his mortality was remarkably low. He preferred lithotomy to lithotrity; and his preference, no doubt, took its origin from a case in private practice, which, subsequent to the use of the lithotrite, terminated fatally from diffuse inflammation. Sir Philip Crampton assisted in the operation, and testified to its skilful performance.

Although, however, we do not find the highest literary capacity in the

writings of this eminent man—yet those writings, when collated, assume no inconsiderable form. His papers in the *Dublin Hospital Reports* extend from 1817 to 1830, and evidence the eminently practical tone of his mind. From 1832 to 1846 Dr. Cusack contributed many papers to the *Dublin Journal of Medical and Chemical Science*; and up to the period of his death his contributions to these pages were not without material influence upon the progress of philosophic and operative surgery. We would especially direct attention to his papers on the Treatment of Aneurism by Compression; on Venereal Disease of the Testicle; on Rupture of the Bladder; on Cleft Palate. They are abundant evidence of the originality of his mind, his sterling and unaffected sense, his boldness, and his dexterity. Throughout the present and the first series of this Journal are to be found many cases deriving their great value from the appended clinical remarks of Dr. Cusack. His two papers, moreover, written jointly, and published in our fourth and fifth volumes, on the Mortality of Irish Medical Practitioners, have laden the profession with a debt of gratitude as lasting, as that which Science already owed to him and William Stokes.

In James Cusack, as it has elsewhere been well and affectionately expressed, the public had to mourn a physician, as well as the most bold and dexterous operator of his day, and the medical profession in all its branches sustained an irreparable loss in the passing away of the man who shed a lustre on the Dublin School of Medicine, who was the embodiment and impersonation of professional honour and honesty, and of whom, dying full of years and honours, it may be said, as Pope did of Addison, that throughout that long and unsullied career

> " He sought no private end,
> He gained no title, but he lost no friend."

He was a great medical surgeon, observant, cautious, and far-seeing ; and his practice (as well as the actions of his life) was characterized by strong common sense. No one ever heard him utter a frivolous or foolish expression, and he was utterly devoid of personal vanity. In the good old days of apprenticeships, he educated more surgeons than any other man in the profession. Undemonstrative, yet firm in opinion, his patients accepted his word as law, and he was one of the *safest* consultants to whom a professional brother could possibly have recourse.

He died at his post. His unobtrusive, honest life stayed, as it should have done, in action. He had suffered long from diffused bronchitis—the symptoms of which became aggravated, and speedily displayed a fatal character, after his visit to Steevens's Hospital, on the 14th of September. On the 25th the profession lost in James Cusack its chief, and every Irish surgeon a brother. Rich in worldly wealth, the tribute of the public to his long service, he died possessed of yet greater treasure than the world

can give—the store secured by a heart of gold that never beat but nobly through a well-spent life.

Still to the faltering pen come for our tender record the names of LEDWICH, HARKAN, KINGSLEY, BRERETON, TAGERT, CATHCART LEES, O'BEIRNE; nor either they, or those of brighter note, placed as the herald of fame would sound them, but as death called them away. And now that the proud wave of their lives has dashed into the soon-forgotten spray against the rock of the Grand and Immutable Will, and all the treasures that they bore lie on the strand, the common property of men, let us take to ourselves the light of their just lives, and, with as high a courage as they owned, and with no greater care for self, foster the science that they loved, and that now so bitterly mourns them. For that science, though owing them much, is but imperfect yet. But the better part of man, which is of perfect love, owes them still more. Owes them the debt of their self-sacrifice; of their deep sympathy; of their unflinching toilsome lives which lifts its voice higher than monuments, and tells of their works more than all the conceits of art, and all the tortured flattery of design; ringing in every tread of their old worn wards, and in the sob of every sufferer lying where they have ministered, into the Song of Hope that such as they, the pure in heart, shall see the face of GOD.

# MEDICAL SUPERINTENDENCE OF ASYLUMS.

[In the Review on Insanity in the last number of this Journal, Vol. xxxii., p. 369, there appeared an account of a Deputation to the Chief Secretary (Sir Robert Peel) from the Association of Medical Officers of Asylums, in reference to the Medical Superintendence of Hospitals for the Insane, and advocating the views of the Resident Physicians. We have since been requested by the Visiting Physicians to insert an account of a Deputation from their body, which waited on Sir Robert Peel, in reference to the same question—a request with which we feel bound to comply, on the principle of *audi alteram partem.*—Ed.]

A Deputation of the Visiting Physicians of Lunatic Asylums in Ireland, consisting of Drs. Cusack, Croker, Banks, Law, Tuohill, Ferguson, Cumming, Dillon, and O'Meara, waited on the Chief Secretary (Sir Robert Peel) on 31st August, 1861.

The object of the Deputation was to lay before the Chief Secretary their views relative to the respective duties of the Visiting Physicians and the Resident Medical Superintendents of Asylums and Hospitals for the Insane. The fact of the Medical Superintendents having brought under the notice of Sir Robert Peel their opinions, rendered it necessary for the Physicians to come forward; the more especially as a statement had been made by the gentleman who addressed the Chief Secretary, which might mislead, and which the Deputation wished to correct. It being known that the rules for regulating Lunatic Asylums were being revised, rendered the present occasion peculiarly opportune for directing the attention of the Government to the results of the experience of the Visiting Physicians on this most important subject.

The high state of efficiency of the Irish Asylums, to which Sir Robert Peel bore testimony in the House of Commons, the Deputation thought might fairly be attributed to their having Visiting Physicians. The Deputation further remarked, that any modification of the rules regulating the relative duties of the Medical Officers which would have the effect of placing the insane more under the medical care of the Superintendents than they are at present, and thus so far withdrawing them from the care of the Physicians, would act most injuriously in two ways: first, in limiting the advantage they at present enjoy of the skill and experience of men constantly engaged in general practice; and, secondly, in the loss to the public of the knowledge and experience acquired by the Visiting Physician in his attendance on the inmates of Hospitals for the Insane.

Dr. Lalor, the Medical Superintendent of the Richmond Asylum, when expressing his views on the subject of the relative duties of the Medical Officers of Asylums, referred to the Report of the Royal Commission, and its recommendation, and, in so doing, made a statement as to the constitution of the Commission, which it was the duty of the Deputation to correct. He said—" When I consider that this is the recommendation of the medical members of the Commission, who have had large personal practical experience of the subject, and who have obtained a high reputation and promotion in consequence, I cannot think that you will allow it to be outweighed in your mind by the single opinion of a gentleman, who, however high his character may be in some other branches of the profession, has had so few opportunities of acquiring knowledge in this." It is necessary to refer to the constitution of the Parliamentary Commission, for the purpose of correcting this error, which has been before alluded to. The Commission consisted of Sir Thomas Redington, Mr. Andrews, Q.C., Mr. Ledwidge (a Lawyer by profession), Dr. Corrigan, and Mr. Wilkes (now a Commissioner in Lunacy, but formerly a Superintendent of a Lunatic Asylum).

There were, then, only *two* medical members—Dr. Corrigan, Physician to the Queen, and Mr. Wilkes, who is a surgeon and apothecary. It is scarcely necessary to observe that Dr. Corrigan holds a position of the highest eminence in his profession, and enjoys a most extensive practice. For seventeen years, he has, moreover, been Physician to the Hospitals of the House of Industry, and the Lunatic Asylum which was connected with them, containing upwards of two hundred lunatics.

Of the *two* medical members of the Commission, one (Mr. Wilkes) agreed with the majority, and Dr. Corrigan dissented. That Mr. Wilkes should sympathize with the Superintendents, and thus advocate the claims of the order to which he had once belonged, was only what might have been expected. Dr. Corrigan brought a mind perfectly unprejudiced to the consideration of the subject, and not only dissented, but, impressed with the great importance of the interests at stake, embodied his objections in a letter to Mr. Walpole, the then Secretary of State.

The Deputation could affirm positively, that this movement on the part of the Superintendents was far from being general; for there were some of their body who declined taking part in it, acknowledging that they felt it a great advantage to have within their reach the skill and experience of men whose assistance, they were not ashamed to confess, they needed in the difficulties inseparable from the diseases of the insane.

The Deputation assured Sir Robert Peel, that the Physicians had no wish to ignore the professional status of the Superintendents; on the contrary, they willingly conceded it; although, up to the present, the Superintendents are not entitled, by the rules of the Privy Council, to any position beyond that of managers.

Without meaning to disparage the Superintendents, the Deputation felt bound to represent that they were, from being excluded from general practice, unequal to the efficient discharge of the grave responsibilities to which they aspired, viz., " the treatment of the inmates of asylums, both as regards their bodily health and mental diseases."

The Deputation was fully alive to the value of Resident Medical Officers in Hospitals for the Insane; but they should be, as in other hospitals, subordinate to the Visiting Physicians, who should direct the medical treatment in all cases of serious bodily disease.

In conclusion, the Deputation directed Sir Robert Peel's attention to the following letter of Dr. Corrigan, whose opinions upon all subjects connected with medicine are worthy of the highest respect :—

" Dublin, 4, Merrion-square, West, July 3, 1858.

" Sir,—In the Report of ' the Lunatic Asylums (Ireland) Commission,' which has been forwarded to you, I have felt it incumbent on me, while concurring in the other parts of the Report, to have my dissent recorded on what appears to me a most important practical point. I was desirous, and I made a request to that effect, that my reasons should be appended to the Report, as, on consideration, I saw grounds to apprehend that no future opportunity of stating them might occur ; and I hoped to be able to show that I had sufficient reasons for the view I took, it being, of course, understood that the Commissioners, differing in opinion, should also append any observations they might think proper. The majority of the Board did not, however, consider that my request should be complied with, and I therefore beg to forward the enclosed communication, containing my reasons in support of my view, with a hope that you will (if you see no impropriety in my request) have it laid before the House, or published in whatever way you may see fit, so that the point at issue in the Report may receive the fullest consideration. I would not take the liberty of making this request, if I did not feel a very strong conviction that the question is one of the utmost importance to the proper care and protection of the most afflicted of our fellow-creatures.—I have, &c.

(Signed) " D. J. Corrigan.

" Right Hon. Spencer H. Walpole, M.P., Secretary of State,
" Home Department, Whitehall, London."

" I am of opinion, as expressed in the body of the Report, that ' there should be a Visiting Medical Officer attached (as heretofore) to each asylum ; that his attendance should not be dependent on the discretion either of the Resident Physician or of the Local Board, but that he should visit the institution daily. That while the Resident Physician and Manager should have general charge of the institution, and be responsible for the treatment of the insane, as such, the duty of the Visiting Medical

Officer in their regard should extend only to cases where his attendance may be required in consultation by the Resident Physician, but that the Visiting Medical Officer should daily visit all cases whatever confined to bed, in seclusion, or under restraint. That he should see, with as little delay as possible, all cases of injury, accident, and childbirth, and record such observations on them as may appear requisite. That he should be directly responsible for the treatment of the sick, as distinguished from the mere insane. That in all cases of discharged patients, the certificate of discharge should be signed by both Resident and Visiting Physicians; and that, in all cases of death, the record of the illness and cause of death should be signed by both the Resident and Visiting Physicians.'

" For the following reasons, I consider it would be wrong to commit the medical, surgical, and moral treatment of the inmates of a lunatic asylum, female as well as male, to the uncontrolled management of any one individual. If there be not a Visiting Physician, this would be the state of each asylum; for we have it in evidence that Governors and House Committees as a general rule do not inspect the asylums: nor even, if they were inclined to do so, would they be capable of efficiently fulfilling such a duty, so that, if there be not a Visiting Physician, whose office it would be to see all cases of illness, accident, injury, pregnancy, and childbirth, as well as all cases subjected to seclusion or restraint, there can, in my opinion, be no sufficient safeguard against cruelty, ill-treatment, neglect, and even immorality. It must be remembered, that the inmates of a lunatic asylum present no analogy to the inmates of any other public institution. The inmates of gaols, workhouses, and hospitals are sane, and can bring their complaints before visitors while in those institutions, and will be listened to, or, on leaving, can have them investigated; while the poor creatures who are the inmates of a lunatic asylum may be terrified into silence, incapable of stating their wrongs or their complaints, and perhaps may have their well-grounded assertions of past ill-treatment considered as the mere delusions of their imagination. I do not consider that any periodical inspection, at intervals more or less distant, will be a sufficient substitute for the daily inspection of a visiting physician.

" I do not think it far-fetched to conceive the existence of abuses in a lunatic asylum, evading detection for a considerable time, if there be no officer daily visiting from without, and free from all connexion with those resident in the asylum, who may be so implicated, that each may be unwilling, or even afraid, to make a disclosure on the other, while the lunatics are all the time the sufferers. The following extract from the last Report of the Commissioners of Lunacy in England will support my argument (*vide* Eleventh Report of the Commissioners in Lunacy to the Lord Chancellor, ordered by the House of Commons to be printed, July 7th, 1857) :—

" ' The sudden death which had formed the subject of inquiry was that of a pauper lunatic, Daniel Dolley, 65 years of age, which took place in the Surrey Asylum on the 9th of April last, and of which notice was transmitted by Mr. Snape (Resident Manager and Medical Superintendent) to this office on the 14th, as produced by disease of the heart; such having been the finding of a coroner's jury at an inquest, held on the 12th by Mr. Carter, the coroner of West Surrey. On the day of the inquest, however, a letter, dated the previous day, and addressed to the Commissioners, not signed by name, but purporting to come from the attendants of the asylum, had reached the office, which led to the suspicion that the inquiry had been so conducted by Mr. Carter, as to elicit none of the material circumstances attending the death. . . . On that occasion (the inquest), no questions had been asked, nor any information given, but such as might seem to exhibit an ordinary occurrence of sudden death. . . . . . The entire substance of Mr. Snape's evidence was, that, having found the deceased violently excited on the morning of the 9th, about half an hour previous to his death, he prescribed a shower-bath. . . . . That he found him dead half an hour later; and that, on subsequently making a *post-mortem* examination of the body, he discovered enough to account for the death, sudden and unexpected as it had been, in extensive disease of the heart.'

" The following are the facts that came out as to the old man's death, on subsequent inquiry; and I shall still give them in the words of the Report, merely omitting unimportant parts :—

" ' On Mr. Snape's coming, in the course of his usual round of the wards, into No. 3, and having it reported to him that Dolley had kicked another patient, he called the old man by his name, and, heedless of his abuse, told him to ' Come this way,' walking, himself, in the direction of the shower-bath.'

" Barnett's (the attendant) evidence may be given in his own words :—

" ' After I had him in, and the bar down, Mr. Snape says, ' Now pull the string, Barnett; keep him in half an hour.' . . . . Before Mr. Snape left, however, he gave another instruction: ' Give him a good dose of the light-coloured mixture ;' not restricting it by any condition having reference to the strength or weakness of the patient, or to the continuance or otherwise of his excitement. . . . . He (Barnett) gave Dolley, on leaving the bath, in compliance with the order, four tablespoonfuls of the mixture, containing two grains of tartarized antimony. . . . . . . Dolley remained in the bath twenty-eight minutes, . . . . ' the water always pouring.' . . . . ' The old man came out,' . . . ' and walked, assisted by Barnett, to the chair by the fire.' ' Here Barnett administered the tartar emetic.' . .

Half an hour before the bath he was 'excited, light-hearted, and dancing.' Immediately after the bath he was shivering. The witness Pineger goes on to state: 'I put his socks on;' . . . . 'and, on looking again at the old man, I saw him with his face drawn up, sitting in the chair, with his head right back, his mouth open, and his cheeks quite tight, as though in a fit. He was carried to bed, but before any restorative could be tried, he was dead.'

" It is only necessary to add to this detail, in reference to Mr. Snape's report of the case being death from 'extensive disease of the heart,' that Mr. Hancock, Surgeon of Charing-cross Hospital, and Mr. Paget, Surgeon-in-Ordinary to the Queen, both examined the heart, and observed no material disease, and nothing in it to occasion death. On examination of the bath by two civil engineers, it appeared that 618 gallons of water at a temperature of 45°, not many degrees above freezing, must have been discharged uninterruptedly over the person of Dolley as he stood in the shower-bath, of which the construction was such as to render, during its continuance, respiration more than ordinarily difficult.

" There is no Visiting Medical Officer attached to the Surrey Asylum. Mr. Snape had sole charge of the medical, surgical, and moral treatment of the patients. The cruelty and false entry of the cause of death in the above case would not have been left to the chance discovery of an anonymous letter if there had been a Visiting Physician to that institution to have been examined on the inquest, whose duty it would have been to have made himself acquainted with the previous circumstances of the case, to have been present at the *post-mortem*, and certified as to the cause of death; and if a case of such cruelty had very nearly escaped discovery, it is to be feared that minor cases of the exercise of bad temper and tyranny, ill-treatment or neglect, may be of frequent occurrence, and yet for a long time escape detection. This case further shows that a state of terrorism may exist to prevent any subordinate from openly giving information; for not one of all the officers or numerous attendants came forward on the inquest to expose the conduct of Mr. Snape.

" In dealing with lunatic asylums and their defenceless inmates, it is necessary to take into consideration, not how many cases of abuse have been discovered, but to reflect on how many may be concealed. All the Irish District Asylums, with the exception of the Cork Asylum, have Visiting Medical Officers. In Cork there is no Visiting Physician. The Resident Manager has the sole medical charge, calling in the Visiting Surgeon only when he deems it necessary; in fact, it is the system which is recommended by the majority of the Commissioners. The circumstances that came out on evidence in that institution, appear to me to show that that system is not one to be adopted. I can here only refer to

the minutes of the evidence generally, with the exception of that in connexion with the examination of Mr. N. Barry.

"Mr. N. Barry had been sent to the asylum under the Lord Lieutenant's warrant, and had been discharged cured. (*Vide* Appendix, Evidence of Mr. Barry.) He came before us to complain of being ill-treated by the keepers, of being beaten by them, of being confined to bed from the injuries he received, of the keepers being repeatedly drunk, of the Resident Physician refusing to permit him to see the Visiting Surgeon when confined to the infirmary, and of his also withholding Mr. Barry's letters to his solicitor, although the right of a lunatic to communicate with his solicitor is protected by act of parliament. The Resident Physician, in reply to Mr. Barry's statements, asserted that, with the exception of the allegation about beating, which he stated in a written report to have been 'grossly exaggerated and malicious' on Mr. Barry's part, all his other statements were 'more fanciful than anything else;' but that he was right as to one man being drunk. On looking over the minute-book, however, it appeared by a memorandum of a meeting of the Board, on the 13th January, that four of the servants were on that day fined for being drunk, and that another was dismissed for bringing in bottles, which, on examining her room, were found to contain whiskey, and that this occurred during the period referred to by Mr. Barry, which appears corroborative of his statements. The evidence of the Visiting Surgeon would have been most desirable in this case, as to Mr. Barry's alleged injuries, and his being sent to hospital in consequence, but it was not available from the circumstance of its being left optional with the Resident Manager to call on him in consultation; and if this system were to be generally adopted, it would happen that it would just be in the cases in which it would be most necessary to have the evidence of a third party that such evidence would not be forthcoming.

"As the treatment of insanity is a mixed medical and moral treatment, I consider it desirable that in cases requiring more than the ordinary routine treatment, there should be at hand the advantage of the experience of the two Medical Officers, each bringing his peculiar knowledge to bear upon them, just as in cases partaking of a mixed medical and surgical nature in hospital and private practice, patients under similar circumstances enjoy a similar advantage. Moreover, I do not consider that the Resident Physician or Manager, no matter how well educated he may have been on his appointment to the care of an asylum, is, after a little time, competent to treat medical or surgical diseases of a serious nature. It is practice alone that keeps up this competency, and this he cannot retain; for an asylum cannot furnish him with sufficient practice, and he can have none out of doors. I do not think it necessary to argue this at length. No one would consider for himself or one of his family the professional opinion of the Resident Physician of an asylum as of

equal value with that of the Practising Physician or Surgeon outside. In the case of the insane, the peculiar professional tact and observation, that are only maintained by constant practice, are even more required than for the sane; for the lunatics may either conceal or not feel those symptoms that will be described by the sane, and hence the Physician or Surgeon is more thrown upon his own powers of diagnosis by signs as contradistinguished from symptoms.

" There is, in my opinion, another reason for having a Visiting Physician of the neighbourhood in regular attendance at an asylum. I am satisfied his visits afford a consolation to the friends outside, and that it tends to lessen their reluctance to send their lunatic relatives into an asylum, to know that they are seen by the Physician from without; and in the event of any ill-founded rumours ever arising, of deaths or sickness from ill-treatment or neglect, the assurance of the extern Physician to the contrary, will do more to reassure them than any assertion coming from within the walls.

" The present rules for the regulation and definition of the duties of Resident Physician and Manager, and of Visiting Physician, are very defective, and hence much confusion has arisen. This was inevitable from the rules of the Privy Council having been originally based on the circumstances of the resident being a lay manager. In some of the asylums this state still exists, while in others, the majority, medical persons have been appointed residents, but still no general rules or regulations have been drawn up. In some cases, merely verbal directions have been given on the respective duties, in others none at all, the Visiting and Resident Physicians arranging their duties by a private agreement; but this confusion appears to me to prove only that some new regulation is necessary, not that the present system is a bad one.

" I have heard it as a reason for discontinuing the Visiting or Consulting Physician, that collisions would occur between him and the resident as to treatment; that injurious consequences would hence arise to the patients, and in the management of the asylums; and that the pride of the Resident would feel hurt by receiving any advice from another physician. I can attach no value whatever to what I believe to be only exaggerated or imaginary evils. We do not find that such collisions arise between the resident medical officers of our large hospitals, and their visiting physicians and surgeons; nor do we find that such collisions take place in the consultation of daily and hourly occurrence in private practice. Nor do we find that physicians and surgeons, possessed of common sense, ever object to receive professional aid in consultation, and I do not see why such collisions should be more likely to be apprehended in the intercourse between the medical attendants of a lunatic asylum than in other instances. If any little jealousy or

bickering has occurred in any instance, it has been owing to the want of rules, and would not recur under proper general regulations.

"There appears to me to be, in addition, a very serious difficulty in the working of the arrangement for the office of visiting or consulting physician, as proposed by the majority of the Commissioners. He is to be called in at the discretion of the Resident Physician; but how is he to be paid? It must either be by a separate fee for each visit, or by an annual salary. In either case the Resident Physician will be most unpleasantly circumstanced. If the Visiting Physician is to be paid by fees, then the Resident Physician, even for the most pressing cases, and in which he conscientiously feels he requires the professional aid of another, may be blamed by the Board of Governors for putting the institution to expense, and even charged with incompetency. If the Visiting Physician, on the other hand, be paid by salary, then he may find fault with the Resident for calling upon him too often, and, as he may think, unnecessarily; while the Board of Governors may blame the Resident for not more often calling in the Visiting Medical Officer; and thus a state of bickering will be engendered between two officers, whose mutual good understanding would be most desirable in the performance of their duties.

<div style="text-align:right">(Signed) "D. J. CORRIGAN, M.D.</div>

"OFFICE OF LUNACY COMMISSION, THE CASTLE,
    "DUBLIN, *July* 3, 1858."

## BOOKS RECEIVED FEBRUARY, 1862

1 Spinal Debility; its Prevention, Pathology, and Cure, in Relation to Curvatures, Paralysis, Epilepsy, and various Deformities. By Ed. W. Tuson, F.R.C.S., &c., &c. London: Davies. 1861. 8vo, pp. 155.

2. A Guide to the Treatment of Diseases of the Skin; with Suggestions for their Prevention. For the use of the Student and General Practitioner. Illustrated by Cases. By Thos. Hunt, F.R.C.S., &c. Fifth Edition. London: T. Richards. 1861. Fcap. 8vo, pp. 256.

3. On Chloroform and some of its Clinical Uses. By Chas. Kidd, M.D., &c. London: Fieldson and Jary. 1861. Pamphlet, pp. 10.

4. Library of Practical Medicine. Published by order of the Massachusetts Medical Society, for the use of its Fellows. Vol. XXIII. Containing Placenta Previa; its History and Treatment. By William Read, M.D. Philadelphia: J. B. Lippincott and Co. 1861. 8vo, pp. 340.

5. General and Medical Education. The Introductory Lecture delivered at the Queen's College, Birmingham. By John Clay, Senior Prof. of Midwifery, &c. London: Churchill. 1861. 8vo, pp. 28.

6. Amputation of the Cervix Uteri. By J. Marion Sims, M.D., &c., &c. Extracted from the Transactions of the Medical Society of the State of New York. 1861. 8vo, pp. 16.

7. Papers relating to Quarantine; communicated to the Board of Trade on the 30th of July, 1861.

8. On the Successful Treatment of Gonorrhœa and Gleet, without Copaiba. By Thos. Weedon Cooke, Surgeon to the Royal Free Hospital, &c. London: Renshaw. 1861. Pamphlet. pp. 32.

9. Edinburgh Veterinary Review. No. XIX.

10. Influence of Tropical Climates in producing the Acute Endemic Diseases of Europeans, including Practical Observations on the Nature and Treatment of their Chronic Sequelæ, under the Influence of the Climate of Europe. By Sir J. R. Martin, C.B., F.R.S., &c., &c. Second Edition. London: Churchill. 1861. 8vo, pp. 778.

11. Transactions of the Pathological Society of London. Vol. XII. Session, 1860-61. 8vo, pp. 256.

12. On Ovariotomy and its Results. By Chas. Clay, M.D., &c., &c. (Reprint.) 8vo, pp. 15.

13. Sulle Malattie da Fermento Morbifico e Sul loro Trattamento. Memoria del Dottor Giovanni Polli. Milano, 1861. 4to, pp. 60.

14. Saggio Farmacologico sui Solfiti e gli Iposolfiti medicinali del Dottore Giovanni Polli. Milano. 8vo, pp. 26.

15. Extrait des Mémoires Italiens delle Malattie da Fermento Morbifico e del loro Trattamento et Saggio Farmacologico sui Solfiti e gli Iposolfiti medicinali. Par le Docteur Jean Polli. Milan. 1861. 8vo, pp. 20.

16. Report of a Committee of the Boston Society for Medical Improvement, on the Alleged Dangers which Accompany the Inhalation of the Vapour of Sulphuric Ether. 1861. 8vo, pp. 36.

17. Memoir of Baron Larrey, Surgeon in Chief of the Grande Armée. From the French. London: Renshaw. 1861. Post 8vo, pp. 256.

18. Medical Climatology; or a Topographical and Meteorological Description of the Localities Resorted to in Winter and Summer by Invalids of Various Classes, both at Home and Abroad. By R. E. Scoresby-Jackson, M.D., &c. London: Churchill. 1862. Post 8vo, pp. 509.

19. A Handbook of Forensic Medicine, by J. Caspar, M.D., &c., &c. Vol. I. New Sydenham Society. 1861. 8vo, pp. 317.

20. Selected Monographs (Five). New Sydenham Society. 1861. 8vo, pp. 329.

21. 1. Note Concernant l'Action du Brome sur l'Iodure d'Aldéhydène. 2. Action du Chlorure d'Acétyle sur l'Aldéhyde. Extrait des Comptes Rendus des Séances de l'Academie des Sciences. Tome XLVII. 3. Sur une Base Nouvelle obtenue par l'Action de l'Ammoniaque sur le Tribromure d'Allyle, Extrait des Annales de Chimie et de Physique. 4. On the Actions of Acids on Glycol. 5. Ueber zwei neue Methoden zur Bestimmung des Stickstoffs in organischen und unorganischen Verbindungen. 6. On the Synthesis of Succinic and Pyrotartaric acids. From Philosophical Transactions, 1861. By Maxwell Simpson, M.B., formerly Lecturer on Chemistry in the Original School of Medicine, Peter-street, Dublin.

22. The Principles and Practice of Obstetrics. By Gunning S. Bedford, A.M., M.D., &c. Illustrated by four coloured lithographic plates, and 99 wood engravings. New York: Wood; London: Sampson, Low, and Son. 1861. 8vo, pp. 731.

23. Medico-Chirurgical Transactions. Vol. XLIV. London. 1861. 8vo, pp. 731.

24. Bradshaw's Invalid Companion to the Continent, comprising General and Medical Notices of the Principal Places of Resort, with Appended Observations on the Influence of Climate and Travelling, and Meteorological Tables. By Edwin Lee, M.D., &c. Second Edition. London: W. J. Adams. 1861. Fcap. 8vo, pp. 416.

25. An Introduction to Mental Philosophy on the Inductive Method. By J. D. Morell, A.M., LL.D. London: Longman. 1862. 8vo, pp. 464.

26. A notice of Menton, Supplementary to Nice and its Climate. With Remarks on the Influence of Climate on Tuberculous Disease. By Edwin Lee, M.D., &c. London: W. J. Adams. 1861. Fcap. 8vo, pp. 43.

27. On a case of Aortic Aneurism, in which a Communication with the Pulmonary Artery was Recognised During Life by Means of Physical Diagnosis. By W. B. Wade, M.B., &c. 8vo. pp. 8. (Reprint from Medico-Chirug. Trans.) 1861.

28. General Outline of the Organization of the Animal Kingdom and Manual of Comparative Anatomy. By Thos. Rymer Jones, F.R.S., &c. Third Edition, illustrated by 423 engravings. London: J. Van Voorst. 8vo, pp. 841.

29. A Manual of Psychological Medicine, containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity, with an Appendix of Cases. By J. C. Bucknill, M.D., &c., and D. H. Tuke, M.D., &c. Second Edition, enlarged and revised. London: J. Churchill. 1862. 8vo, pp. 600.

30. Précis Iconographique des Maladies Vénériennes. Par M. A. Cullerier, dessins d'apres nature, par M. Léveillé, Gravures au burin sur acier. 2ème Livraison. Paris: Librairie de Mequignon.—Marvis. 1861. Post 8vo. pp. 36.

31. The Royal College of Physicians and Surgeons under the Medical Act. By J. Struthers M.D., &c. Edinburgh: Maclachlan and Stewart. 1861. 8vo, pp. 51.

32. Clinical Essays. By B. W. Richardson, M.D., &c. Asclepiad Vol. I. Churchill. 1862. 8vo, pp. 272.

33. De la Syphilisation, Etat actuel et Statistique. Par W. Boeck. Christiana: Jensen. 1860. 8vo, pp. 72.

34. Syphilisations forsog, foretagne af W. Boeck. Christiana. 1853. 8vo, pp. 48.

35. 2. Beretning om Sundhedstilstanden og Medicinal forholdene. J. Norge, 1857–58. Christiana. 1860–61. pp. 127-149.

36. Det Kongelige Norske, Frederiks Universitets Stiftelse Fremstillet I Anledning af dets halvhundredaarsfest. Af M. J. Mourad. Christiana. 1861. 8vo, pp. 112.

37. Om Spedalskhed som endemisk. Sygdon. I. Norge. Ved. Cand. Med. Bidenkap. Christiana. 1860. 8vo, pp. 208.

38. Inversio vesicæ urinariæ, og Luxationes Femorum Congenitæ, hos Samme Individ Iagttagne af Lector voss. Christiana. 1857. 4to, pp. 25.

39. Traite de la Radesyge (Syphilis Tertiaire). Par W. Boeck. Christiana: Dahl. 1860. 8vo, pp. 51.

40. Microscopic Anatomy of the Lumbar Enlargement of the Spinal Cord. By John Dean, M.D. Communicated to the American Academy of Arts and Sciences, Nov. 14, 1860. 4to, pp. 21.

41. Medical Education. A Discourse Delivered at the Meath Hospital, by W. Stokes, M.D., &c. Dublin: Hodges and Smith. 1861. 8vo, pp. 27.

42. Observations on the Growth of the Long Bones and of Stumps. By G. M. Humphry, M.D., &c. (Reprint from Med. Chir. Trans.) 1861. 8vo, pp. 18.

43. Les Médecins Morelistes, Code Philosophique et Religieux, Extrait des Ecrits des Médecins, Anciens et Modernes; Notamment des Docteurs Français Contemporaires. Par Madame Woillez. Paris: Baillière. 1862. 8vo, pp. 390.

44. Etudes sur l'Histoire Naturelle, Par Camille Delvaille. Paris: G. Baillière. 1862. Fcap. 8vo, pp. 251.

45. The Blow-Pipe Vade Mecum. The Blow-Pipe Characters of Minerals, from the Original Observations of Aquilla Smith, M.D., &c. Alphabetically arranged and edited by the Rev. Samuel Haughton, M.A., F.R.S., &c., and R. W. Scott, M.A., &c. London: Williams and Norgate, 1862. 8vo, pp. 65.

46. On the Immediate Treatment of Stricture of the Urethra, by the employment of the "Stricture Dilator." By B. Holt, F.R.C.S., &c. London: Churchill. 1862. 8vo, pp. 57.

47. Clinical Surgery. The Surgery of the Mouth, Pharynx, Abdomen, and Rectum, including Hernia. By Thomas Bryant, F.R.C.S., &c. Part III. London: Churchill, 1861. 8vo, pp. 101.

48. The London and Provincial Medical Directory, inclusive of the Medical Directories for Scotland and Ireland, and

the General Medical Register. London:
Churchill. 1862. 8vo. pp. 1006.

49. British Journal of Homœopathy,
No. LXXIX., January 1, 1862.

50. Atlas of Portraits of Diseases of the
Skin, Issued by the New Sydenham
Society. Second Fasiculus.

51. Report of the Hospital for the
Treatment of Diseases of Children, for
1861. Dublin.

52. On Some of the More Prominent
Causes of Excessive Mortality in Early Life.
By W. Moore, A.B., M.D., &c. Dublin:
Fannin & Co. 1861. Pamphlet, pp. 21.

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## PERIODICALS WITH WHICH THE DUBLIN QUARTERLY
## JOURNAL IS EXCHANGED.

### GREAT BRITAIN.

1. The British and Foreign Medico-Chirurgical Review and Journal of Practical Medicine. Published Quarterly. London: Churchill. (Received regularly.)

2. The Edinburgh Medical Journal. Published Monthly. Edinburgh: Oliver and Boyd. (Received irregularly.)

3. The Retrospect of Medicine, being a Half-yearly Journal; containing a Retrospective View of every Discovery and practical Improvement in the Medical Sciences. Edited by W. Braithwaite. London: Simpkin and Co. (Received regularly.)

4. The Half-yearly Abstract of the Medical Sciences, being a Practical and Analytical Digest of the principal British and Continental Medical Works, &c. Published Half-Yearly. Edited by W. H. Ranking, M.D., and C. B. Radcliffe, M.D. London: Churchill. (Received regularly.)

5. Pharmaceutical Journal and Transactions. Published Monthly. London. (Received regularly.)

6. The Lancet. A Journal of British and Foreign Medicine, Physiology, Surgery, Chemistry, Criticism, Literature, and News. Edited by Thomas Wakely, Surgeon. Published Weekly. London. (Received regularly.)

7. Medical Times and Gazette. Published Weekly. London: John Churchill. (Received Regularly.)

8. Association Medical Journal. Published Weekly. London: Honeyman. (Received regularly.)

9. The Medical Circular. Published Weekly. London: Harris. (Received regularly.)

10. Medical Critic and Psychological Journal. Edited by Forbes Winslow, M.D. Published Quarterly. London: J. W. Davies. (Received regularly.)

11. The Asylum Journal of Mental Science. Edited by J. C. Bucknill, M.D. London: Longman. (Received regularly.)

12. The Glasgow Medical Journal. Published Quarterly. Mackenzie. (Received irregularly.)

13. The Athenæum--Journal of English and Foreign Literature, Science, &c. Published Weekly. London. (Received regularly.)

14. The Dublin Medical Press. Published Weekly. (Received regularly.)

15. The London Medical Review. Published Monthly. London: Simpkin and Marshall.

16. The Natural History Review: a Quarterly Journal of Biological Science. London: Williams and Norgate.

17. The Dublin Quarterly Journal of Science; containing Papers Read Before The Royal Dublin Society, The Royal Irish Academy, The Geological Society of Ireland, and Natural History Society of Dublin. Edited by the Rev. S. Haughton, M.A., F.R.S,, F.T.C.D. Dublin: M'Glashan and Gill.

### INDIA.

18. The Indian Annals of Medical Science; or Half-yearly Journal of Practical Medicine and Surgery. Calcutta: Lepage and Co. (Received regularly.)

19. Transactions of the Medical and Physical Society of Bombay. Printed at the Bombay Education Society's Press. (Received regularly.)

20. The Madras Quarterly Journal of Medical Science in all its Branches, including Original Essays, Reviews, Reports, and Medical Intelligence. Madras: Gantz, Brothers.

### AUSTRALIA.

21. The Australian Medical Journal. Melbourne: Wilson and Mackinnon. Published Quaterly. (Received regularly.)

### AMERICA.

22. The American Journal of the Medical Sciences. Edited by Isaac Hays, M.D. Published Quarterly. Philadelphia: Blanchard and Lea. (Received regularly).

23. The North American Medico-Chirurgical Review. A Bi-monthly Journal. Edited by S. D. Gross, M.D., and T. G. Richardson, M.D. Philadelphia: Lippincott and Co. (Received regularly.)

24. The American Medical Times; being a Weekly series of the New York Journal of Medicine. Published Weekly. New York. (Received regularly.)

25. The American Journal of Science and Arts. Conducted by Professors Silliman and B. Silliman, Jun., and J. D. Dana, &c. Published Monthly. New Haven. (Received regularly.)

26. The American Journal of Dental Science. Edited by C. A. Harris, M.D., and A. S. Piggot, M.D. Published Quarterly. Philadelphia: Lindsay and Blakiston. (Received regularly.)

27. Charleston Medical Journal and Review. Published Monthly. Charleston, U.S. (Received regularly.)

27 ª. The American Journal of Insanity, Utica, N.Y.: State Lunatic Asylum.

FRANCE.

28. Gazette Médicale de Paris. Published Weekly. Paris. (Received regularly.)

29. Gazette Hebdomadaire de Médecine et de Chirurgie. Published Weekly. Paris: Victor Masson. (Received regularly.)

30. Journal de Chimie Médicale, de Pharmacie, de Toxicologie, et Revue des nouvelles, scientifiques, nationales et étrangères, &c. Published Monthly. Paris: Labé. (Received regularly.)

31. Journal de Pharmacie et de Chimie, &c. Published Monthly. Paris: Victor Masson. (Received regularly.)

32. L'Union Médicale, Journal des intérêts scientifiques et pratiques, moraux et professionnels du Corps médical. Published three times a Week. Paris. (Received regularly.)

33. La Lancette Française, Gazette des Hôpitaux civil et militaires. Published three times a Week. Paris. (Received regularly.)

34. Le Moniteur des Sciences Médicales et Pharmaceutiques. Redacteur en chef, M. H. de Castlenau. Paris. Published three times a Week. (Received regularly.)

35. Revue Médicale Française et étrangère, Journal des Progrès de la Médecine Hippocratique. Published twice a Month. Publié par le Docteur Sales-Girons. Paris: (Received regularly.)

36. Archives Générales de Médecine; Journal Complémentaire des Sciences Médicales. Published Monthly. Paris: Labé. (Received regularly.)

37. Bulletin de l'Académie de Médecine. Published Monthly. Paris: Baillière. (Received regularly.)

38. Mémoires de l'Académie de Médecine. (Received regularly.)

39. Revue de Thérapeutique Médico-Chirurgicale. Published twice a Month. Paris: Dr. A. Martin-Lauzer. (Received regularly.)

40. Journal de Médecine et de Chirurgie Pratiques a l'Usage des Médecines. Published Monthly. Par Lucas-Championnère. Paris. (Received regularly.)

41. Journal des Connaissances Médicales et Pharmaceutiques Published every ten days. Paris. (Received regularly.)

42. Annales Médico - Psychologiques. Par MM. Baillarger, Cerise, et Moreau. Published Quarterly. Paris: V. Masson. (Received regularly.)

43. Bulletin Général de Thérapeutique, Médicale et Chirurgicale. Recueil pratique. Par le Docteur Debout. Published twice a Month. Paris. (Received regularly.)

44. Répertoire de Pharmacie. Recueil pratique. Par M. le Dr. Bouchardat. Published Monthly. (Received regularly.)

45. Gazette Médicale de Strasbourg. Published Monthly. (Received regularly.)

46. Journal de Médecine de Bordeaux. Redacteur en chef, M. Costes. Published Monthly. (Received regularly.)

47. L'Union Médicale de la Gironde. Bordeaux. Published Monthly. (Received regularly.)

48. Annales D'Hygiène Publique et le Mèdecine Légale. Paris. Published Quarterly. (Received regularly.)

49. Gazette Médicale de Lyon. Dirigée par le Dr. P. Diday. Published Bi-monthly. (Received regularly.)

50. Journal de la Physiologie de l'Homme et des Animaux. Publié sous la Direction du Dr. E. Brown-Séquard. Paris: Masson. Published Quarterly. (Received regularly.)

BELGIUM.

51. Mémoires et Bulletin de l'Académie Royale de Médecine de Belgium, Brussels. (Received regularly.)

52. Annales D'Oculistique. Fondées par le Docteur Florent Cunier. Published Monthly. Brussels. (Received regularly.)

63. Annales et Bulletin de la Société de Médecine de Gand. Published Monthly. (Received regularly.)

GERMANY.

54. Zeitschrift für rationelle Medicin; herausgegeben Von Dr. J. Henle und Dr. C. v. Pfeufer. Published Monthly. Heidelberg and Leipzig: C. F. Winter. (Received regularly.)

55. Vierteljahrschrift für die praktische Heilkunde, herausgegeben von der medicinischen Facultät in Prag. Published Quarterly. Prague. Karn André. (Received regularly.)
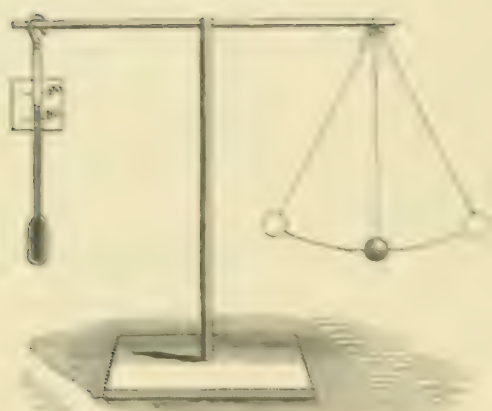
56. Canstatt's Jahresbericht über die Fortschritte der gesammten Medicin in allen Ländern. Redigirt Von Pr. Scherer, Pr. Virchow, und Dr. Eisenmann. Würzburg: Stahel. (Received regularly.)

57. Medicin Chirurg. Monatshefte. Erlangen. Fred. Enke.

58. Aerztliches Intelligenz-Blatt. Organ für Bayerns Staatliche und öffentliche Heilkunde. Munich: C. Kaiser. (Received regularly.)

59. Wochenblatt der Zeitschrift der k. k. Gesellschaft der Aerzte in Wien (Beilage zu den Jahrbüchern). Redigirt von A. Duchek, J. Klob, A. Schauenstein. Published Weekly. Leipzig: Hinrichs.

#### PRUSSIA.

60. Archiv für pathologische Anatomie und Physiologie, &c. Herausgegeben von R. Virchow. Berlin: G. Reimer. Published Monthly. (Received regularly.)

61. Archiv für Klinische Chirurgie. Herausgegeben von Dr. B. Langenbeck. Redigirt von Dr. Billroth, Prof. der Chirurgie, und Dr. Gurlt, Docent der Chirurgie in Berlin. Berlin: August Hirschwald.

#### HOLLAND.

62. Archiv für die Holländischen Beiträge zur Natur-und Heilkunde, Herausgegeben von F. C. Donders, Utrecht, und W. Berlin, Amsterdam, Utrecht C. Van Der Post. (Received Irregularly.)

#### NORWAY.

63. Norsk Magazin, for Lægevidenskaben, udgivet af det medicinske Selskab i Christiania. Redigeret af W. Boeck. Faye. A. W. Münster. Lund: Voss. Published Monthly. Christiania: Feilberg and Landmark. (Received regularly.)

#### SWEDEN.

64. Hygiea, Medicinsk och Farmaceutisk Manadskrift. Published Monthly. Stockholm. (Received regularly.)

#### DENMARK.

65. Bibliothek for Læger. Udgivet af Direktionen for det Classenske Literaturselskab. Redigeret af Dr. E. Dahlerup. Copenhagen: Reitzels. (Received irregularly.)

#### ITALY.

66. Bulletino delle Scienze Mediche. Publicato per cura della Società Medico-Chirurgica di Bologna. Published Monthly. (Received regularly.)

67. Giornale Veneto di Scienze Mediche. Published Monthly. (Received regularly.)

68. Lo Sperimentale ovvero Giornale Critico di Medicina e Chirurgia per sevire al Bisogni dell' Arte Salutare. Direttore Prof. C. C. M. Bufalini. Published Monthly. Florence. (Received regularly.)

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# NOTICES TO CORRESPONDENTS.

The valuable Retrospect of the Progress of Surgery during the Last Decade, commenced in the present number, will be concluded in the next; after which a Retrospect of the Progress of Medicine during the same period will be inserted, prepared by R. D. Lyons, M.D., Professor of the Practice of Medicine in the Catholic University and Physician to Jervis Street Hospital. Retrospects on Psychological Medicine, Therapeutics and Materia Medica, and on Midwifery, Physiology, Opthalmic Surgery, &c., &c., will follow.

We have added an extra Sheet to the present Number, to enable us to insert the article "In Memoriam."

The enlarged size of the page now adopted, affords room for an increased amount of matter, while the new type and fine paper improve the appearance of the Journal.

We have been obliged to hold over several Reviews and Original Papers.

Books and Periodicals published in Northern Europe and the German States, intended for our Journal, should be transmitted "For the Editor of the Dublin Quarterly Medical Journal, care of Messrs. Trübner and Co., *London,*" *through their Correspondents* in the principal Towns on the Continent. Our Correspondents in France, Belgium, Italy, and Spain, are requested to communicate with us through "Doctor Higgins, 212, *Rue Rivoli, Paris.*"

AMERICAN Books and Journals often come to hand with such an amount of Charges on them, that we cannot release them. It is requested that *all* communications from the United States shall be forwarded to Mr. John Wiley, *New York;* or Messrs Blanchard and Lea, *Philadelphia,* directed to us, to the care of Messrs. Trübner and Co., *London.*

# THE

# DUBLIN QUARTERLY JOURNAL

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## PART I.
## ORIGINAL COMMUNICATIONS.

ART. IX.—*On the Employment of a Heated Thermometer for the Measurement of the Cooling Power of the Air on the Human Body.* By JONATHAN OSBORNE, M.D., King's Professor of Materia Medica; &c., &c.

Ταράσσει τους ανθρώπους ου τα πράγματα αλλά τα περι των πραγμάτων δόγματα.—EPICTETUS, 5.

PHYSICIANS often anxiously examine meteorological tables in order to ascertain the localities best suited to their patients. There is no want of such tables; and many of them constructed with great care and elaboration. Within late years we have not only observations thermometric and barometric, with their highest and lowest daily readings, but those of the wet and dry bulb-thermometer, in order to supply us with data for estimating the amount of moisture in the air; and, in the more extensive establishments, the anemometers and rain gauges appear to complete the entire collection of facts respecting the state of the atmosphere, according to our present mode of observing.

When, however, we wish to learn from such tables the state of localities with reference to their actual influence on the human body, we encounter a deficiency which all have experienced, and which is often attempted to be supplied by an appeal to popular observation, and by resorting to the sensation of hot and cold, possessed in common by the most barbarous as well as the most civilised classes of mankind. Thus, in some localities with a high thermometric temperature, we are informed that invalids complain of the cold; and in others, where the thermometer proclaims it to be cold, the inhabitants find it to be warm. Vague and inaccurate as these popular statements must be, yet, without them, no just estimate of climate can be formed. Within a short period a highly respectable physician brought forward his thermometric observations as an irrefragable testimony of the mild and genial climate of a certain place on the western coast of Ireland, where even the trees are stunted in their growth by the constant wind blowing from the Atlantic. One such example of this kind is surely a sufficient proof that up to the present time we are more dependent on our feelings of cold and heat, imperfect though they may be, than on any meteorological observations hitherto made, and that they are required to enable us to form a judgment as to the cooling or heating qualities of the air.

Several years ago, under a deep conviction that our thermometric observations, as hitherto conducted, were inadequate to instruct the physician in what he most desires to know respecting climate, I brought before the British Association, at their first meeting in Dublin, a proposal for using a heated thermometer. This was accompanied by several illustrations of the behaviour of such an instrument under various circumstances, in order to prove its applicability to every condition of climate or locality. The eminent persons at that time assembled in the section expressed their approbation, and three committees were appointed, viz., one in London, one in Edinburgh, and one in Dublin, to investigate the subject. However, as I did not feel called upon to bestow more labour on a subject which ought to have no more interest for me than for others, it has continued to be neglected up to the present time. Some years later, when the meteorological survey of Ireland was undertaken, under the auspices of the Royal Irish Academy, I suggested that observations with the heated thermometer should be included among those to be made at the various stations. It was recommended by some members of the committee, whose names, were I to mention them, would at once

enlist the confidence of the scientific world in its favour; but it was considered by the majority to require too much trouble on the part of the observers, and was consequently abandoned.

Since its first introduction I have never yet been shaken in my opinion of its value; and have subsequently made some changes in order to render its use more intelligible, and, at the same time, to facilitate its application to various practical purposes. The great object has been to render the all-important agencies of heat, and cold, and climate, subject to actual measurement, so that they may be entirely, and without any exception or reserve, dealt with like any of the other appliances of medical science.

The principle on which the use of the heated thermometer depends is easy to be understood. The bulb being heated up to 90° Far. represents the heat of the surface of the human body; when in this state it is exposed to a cooler medium—whether air, or water, or mixture of both, as moist air—and allowed to cool to 80° Far.; the time required for cooling these 10 degrees represents (inversely) the cooling power exerted by that medium, whatever it may be, or however applied. This cooling power is derived from other agencies besides difference of temperature—as from radiation of the neighbouring objects, conducting power of the surrounding medium, and more especially from currents causing various proportions of it to be brought into contact with the heated body within a given time. Now these agencies have their combined results exhibited in the degree of rapidity with which the cooling is effected. Placed, as we are, in a medium, with few exceptions, always below 80°, we are constantly undergoing a process of cooling. In our ordinary clothing we feel just comfortable at 56° in-doors; but when exposed to a current of air, even at the same temperature, we feel cold in proportion to the force of the current, or in proportion to the conducting power imparted to it by increased moisture. Both these are agencies of which the thermometer takes no notice. Its indications are furnished by the contractions or expansions of a fluid, whether mercury or spirit, which always maintains the same temperature as the surrounding medium, and accommodates itself to these changes by altering its own density in the same proportion. The living animal, on the contrary, as always maintaining a temperature of its own, and as constantly resisting cooling agencies, is not to be considered as passively submitting, like the fluid of the thermometer in its ordinary state. When heated to 90° Far.—that being nearly the temperature of the surface of our bodies—in the rapidity with which

it is cooled, depending on the intensity of the cooling influences, it furnishes an index to their combined effect. It does not depict the force of any one of the cooling influences taken singly, but gives the sum of them all acting simultaneously.

This accomplishes the great desideratum of rendering the thermometer practically useful. As the instrument thus heated becomes the representative of the heat at the surface of the human body; and the rapidity with which it is cooled represents the energy of the cooling forces; I venture to propose that, under this adaptation, it should be called the *animal-heat thermometer*. The less the number of seconds in which it cools, the greater is the cooling power, and *vice versâ*; so that the greatest warmth is expressed by the greatest number of seconds required for cooling down a given number of degrees. The thermometer for this purpose is to be graduated only from 90° to 80° Far. At each observation it must be heated up to 90°. This may be done by immersing the bulb in warm water; after which it must be wiped. Or it may be heated in its tin case over a spirit lamp. Another mode of heating it, which appears very unscientific, but is very convenient when out of doors, is to hold the bulb of the thermometer close to the neck of the observer, inside his shirt collar, for two or three minutes, when it may always be heated to the required temperature, or even a few degrees above it.

For the *animal-heat thermometer*, the number of seconds during which it cools these 10° forms the scale of measurement. The number one commences when the instrument is plunged into water at, or nearly at, freezing point; and for the other end of the scale, when in calm air, at temperatures approaching 80° Far., the number of seconds will amount to several hundred. At these high temperatures it would be most convenient, and even become necessary, to take only the five degrees from 90° to 85° Far.; and in this case the number of seconds would be much less than half, from the rapidity of cooling being in a greatly increased ratio to the difference of temperature.

A very important consideration is the choice of thermometers. For this purpose they should be without any kind of frame, except a hook at the top for convenience of suspension. I prefer the spirit thermometer as being more easily seen, and as less rapid in its descent than mercury, and the cylindrical bulb as being less liable to be broken than the spherical bulb. In order to obtain uniformity in the action of different thermometers, to be used by observers in different localities, it will be necessary to place a number of them,

previously graduated at 80° and 90°, in cold water and cold air of certain assigned temperatures, and to select from these such as cool down at what shall be fixed as a standard rate.

For example, the thermometer now used by me cools down the 10° in water at rest, temperature 45° Far., in 6″; and in water at rest, temperature 65° Far., in 12″. In water the cooling is too rapid to secure accuracy in counting the seconds, and therefore must not be depended on. The rate of cooling in air may be taken by placing the thermometer in the middle of a cylindrical bottle of certain dimensions, say two inches diameter, so as to guard it against currents. If the thermometer which I now use be taken as a standard, its rate of cooling from 90° to 80°, within this cylinder, is as follows:—At 40° it cooled in 122″; at 60° it cooled in 186″. If the instrument was not enclosed within the cylinder the results would be very different and very uncertain, from the effect of currents of air, even in the most sheltered apartments, as will be evident from experiments to be mentioned hereafter.

For counting the seconds a second watch may be used; but as it requires some practice to keep the eye both on the thermometer and the dial at the same time, and especially at the moment of stopping, the easiest mode is to use a string pendulum vibrating half seconds. This is portable; and the rod or ring to which it is attached may be suspended any where within view of the observer, due care being taken that it shall not produce a current of air so as to affect the bulb of the thermometer.

The following observations are intended to illustrate the facts exhibited by the heated thermometer:—

First.—*It shows the conducting power of air or water, respecting which the ordinary thermometer is absolutely silent.*

The temperature of an apartment warmed with fire and gas was 54° Far.; in it the *animal-heat thermometer* cooled from 90° to 80° Far. in 94″. The same heated thermometer, in water of same temperature, cooled the same amount in 8″. Thus showing that water at 54° Far. is nearly 12 times as cold as the air at the same temperature—a fact conformable with our sensations on taking a cold bath of the same temperature as the air, but of which the ordinary thermometer takes no notice.

In a closed room, temperature 40° Far., it cooled in 74″. In the same room, same temperature, the bulb loosely covered with a piece of damp woollen cloth, it cooled in 36″. Thus showing the effect of damp clothes, even in the house, to be as 2 to 1. This proportion

would, no doubt, be greatly augmented out of doors, and by exposure to a breeze.

*Second.—It shows the cooling effects of currents in the surrounding media of air or water.*

In water at rest, temperature 70° Far., it cooled in 24″; but when agitated in the same, in 15″. In this simple experiment we see the real limit to swimming. Great as are the muscular achievements in which some men excel their fellows, none have ever been able to swim beyond a certain distance—such as that across the Hellespont—because the application of fresh surfaces of water, even of the ordinary temperature, cools the body beyond its powers of supplying heat. Here we have the cooling as increased by progression compared with our remaining stationary in the water in the proportion of 100° to 60°, which would be much greater at a lower temperature.

In a room, temperature 57°, the *animal-heat thermometer* cooled in 115″. When blown on with a bellows, in the same room, it cooled in 16″. It is needless to say that the thermometer, in its ordinary application, gives no note of this difference; the wind blown from the bellows having the same temperature as the air of the apartment, and yet the cold is nearly as 100 to 14. This cooling effect of currents is illustrated by the punkah used in the East, and by the ordinary fan. Even in a room, with all the windows and doors shut, there are cooling effects of the internal currents to be measured by this instrument. Thus, the animal-heat thermometer, in a closed apartment, temperature 60°, cooled in 131″. Placed in the same apartment, in a cylindrical glass jar about two inches in diameter, it cooled in 157″; showing the warmth in the one case to that in the other as 83 to 100—of which the thermometer gives no indication.

*Third.—It shows the effects of wind, that most important element of climate, and which is entirely unheeded by the ordinary thermometer.*

Exposed to the open air, temperature 61°, it cooled in 45″. Exposed to the same air, but protected by the glass cylinder, it cooled in 149″; showing the warmth experienced in the one case to be to that in the other as 30 to 100; and yet in our best thermometric accounts of climates this difference is unnoticed, as if it did not exist.

I have learned from a lady, once resident in St. Petersburgh, that during the great severity of winter, when the thermometer is at many degrees below zero, the drivers of public vehicles are bound

to be at their stands; but if there is a wind, even to a small degree, they may stay at home, it having been ascertained that dangerous and even fatal effects resulted from such exposure. Similar observations are recorded in the journals of our arctic voyagers.

This cooling effect of the wind, which makes itself to be felt even when blowing at a moderate temperature, has not hitherto been attempted to be estimated—and it is improbable that it will ever be accomplished in any other way than that now proposed. Even with respect to the anemometer, supposing that it could be rendered applicable to this purpose, yet difficulties meet us *in limine.* Mr. Glaisher (Report on Meteorology, 1847) says that "we can speak with no confidence as to the average strength of the wind, no two observers having estimated the value upon the same scale."

Fourth.—*It shows the refrigerating effect of air admitted into apartments from open windows.*

In a room without a fire, temperature 44°, it cooled in 72″. In the same room, within a foot of the window open a few inches, the night being calm, and the external temperature being 34° Far., it cooled in 32″. In this observation the night was remarkably calm, and yet the cooling effect produced was more than two to one, although the difference of temperature, according to the ordinary thermometer, was only that between 34 and 44.

On another night, the internal temperature being 51° and the external 45°, the *animal-heat thermometer*, in the same apartment, near the closed window, cooled in 100″; but when a small portion of the window was open, so as to admit a blast from without blowing in that direction, it cooled in 33″; that is, the warmth which was as 100 suddenly became as 33, a ratio which would be greatly increased if the apartment had been at a high temperature; and it is in such cases that windows are most frequently opened for the admission of air.[a]

[a] The cold air thus applied becomes indeed "*the arrow that flyeth by day,*" and signalises its visit not so much by present inconvenience as by those various inflammatory and often fatal disorders resulting from it, which are so well known to the medical practitioner. In a long corridor at Sir Patrick Dun's Hospital, formerly left exposed to a violent current of air from open doors at the end of it, and felt to be inclement and dangerous even by those most reckless of cold, I believe it could be proved that to stop in it for a stated number of hours would be attended with more danger than to be present for the same space of time in any of the great battles fought in Europe. In none of these have the killed and wounded amounted to more than one-fourth of the armies engaged; a proportion inferior to that of the fatal and dangerous diseases certain to be produced by the blast in that corridor during the same number of hours. The agency of cold as a cause of disease is apparent in the tables of

Fifth.—*It shows to what degree the heat derived from an open fire-place is accompanied by a cooling process from the current of air rushing towards the fire.*

In front of a small screen opposite the fire the thermometer stood at 61° Far., the *animal-heat thermometer* cooled in 123″. Behind the same screen the thermometer stood at 54°, the *animal-heat thermometer* cooled in 79″. Now, in an apartment of the same temperature, the *animal-heat thermometer*, not near the fire, cooled in 100″. This shows, that in the case of a man sitting opposite the fire, warm as his shins may be, the calves of his legs are not only not warmed, but are exposed to a cold above that of an ordinary apartment of the same temperature in the proportion of 100 to 79.

Sixth.—*It shows the cold and heat of climates as actually felt by human beings.*

The tables which I have kept to compare the *animal-heat thermometer* with the ordinary thermometer, as a means of measuring cold, prove the latter to represent only one out of several agencies engaged: hence, while sometimes a certain conformity between them is observable, yet the *animal-heat thermometer* takes a much wider range, shows a greater sensibility, and always has this distinctive peculiarity, that it represents the temperature as judged of by the feelings of the observer. This conformity between the results of the *animal-heat thermometer* and our feelings is confirmed no less on taking averages than in individual observations. Thus, on comparing two tables—one of 20 days' observations, taken in September, outside a window with a north aspect, but in some degree sheltered from that wind, and the other table of 24 days' observations, taken inside the apartment, which was always without a fire, the heat of the outside was to that of the inside, according to the ordinary thermometer, as 90 to 100, but according to the *animal-heat thermometer*, as 54 to 100. Now, that this latter number expresses the truth must be evident to any one who has ever enjoyed the shelter of a house as contrasted with exposure to the open air.

When we find in Professor Dove's isothermic lines that in the month of January the temperature of the centre of Ireland is the

mortality during the months of winter as compared with those of summer. Even during the latter season the same agency is in active operation. From an estimate which I made of the patients, in summer, at Sir P. Dun's, most of them chronic, and all serious cases, above one-half were to be distinctly referred to cold variously applied, but in the greatest number to currents of air.

same as that of Montpellier or Marseilles, we see a statement so contrary to the experience of living men and women as to proclaim loudly the want of some other means for ascertaining the effects of climates besides those hitherto in use. It is under the conviction that this mode of observation supplies the defect that it is submitted to the medical profession as most immediately suited for their purposes.

The apparatus is so simple, the method of using it so easy, and its results so exactly accordant with the effects produced on the sensible surface of the human body, that by it the one instrument seems to present us with an epitome of all that we want to know from all the instruments now used in meteorology: hence, then, long as this proposal has been neglected, I cannot refrain from attributing it to the imperfect manner in which it has been brought forward; and I still hope that, sooner or later, it may attract the notice of those who shall have the opportunities of testing its utility and practical importance.

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ART. X.—*On the Statistics of the Mortality of Fractures of the Skull; Effects of Operation, &c., &c.*[a] By HENRY MURNEY, M.D., Surgeon to Belfast General Hospital; President Belfast Clinical and Pathological Society; formerly Demonstrator of Anatomy Queen's College, &c., &c.

I HAVE frequently noticed there is a tendency to class all fractures of the skull together, and to look upon the patient's prospect as little short of hopeless. Serious as the mortality is, I did not think an examination of statistics would show so many sufferers rescued from death.

I would here observe that, as a rule, I look with great caution on statistical tables, knowing how frequently cases are classed together because of some trifling point of resemblance, although they may differ in most important particulars; and also, that it is much more likely a man would publish a successful than a fatal case, not that any desire to mislead or give a false idea of the mortality of a disease might exist; but when, from the serious character of the affection, it was expected the tendency would be to death, a sense of

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[a] Read before the Belfast Clinical and Pathological Society.

satisfaction, perhaps a lurking one of pride, that, contrary to all anticipations, recovery ensued, might tempt him to place on record that which probably he would not have done if the prognosis had been verified. Grave objections, no doubt; but, on the other hand, I may say, for some time past, our Medical Journals have contained records of all the most serious cases, with operations performed, in the London and principal Provincial Hospitals in England, we are thus likely to obtain an account of all unsuccessful as well as successful cases, and will be enabled to approximate the mortality of many injuries not yet precisely defined. I would add my belief that, from the fatal character of fractures of the skull, surgeons hesitate less about the publication of the cases than in many other affections requiring interference. These reasons I consider are sufficient to warrant a greater degree of confidence than is usually reposed in statistical tables, and I make use of them as giving by figures an approach to the mortality, effects of operation, &c., &c., and some other particulars in this class of affection.

I have records of several cases of fractures of the head which have come under my notice, I shall take the liberty of referring to a few of them where I find they illustrate portions of the subject. My information is not so accurate on some points as I could wish: for instance, in fracture of the base, the reporter frequently mentions that fact without specifying the part of the skull involved; and in injury of the superior region of the head, the calvaria is named without specifying the bone or bones injured.

I have taken a period of 10 years, from 1851 to 1860, inclusive, and have tabulated the cases of fractures of the skull to the number of 253, which appear in the following Journals:—*Times* and *Gazette; Lancet; Dublin Medical Press; Dublin Hospital Gazette; Edinburgh Monthly Journal; Dublin Quarterly; Guy's Hospital Reports;* and the *Trans. Belfast Clin. & Path. Soc.* I have also examined *Braithwaite's Retrospect*, and the *British and Foreign Medico Chirurgical Review.* I had not access to other Journals. Twenty-five cases were treated by practitioners not attached to public institutions; all the others were contributed by the attendants on the large metropolitan and provincial institutions, or by medical officers in the public service.

Of course I shall follow the usual division of the subject, viz.:— Fractures involving the calvaria or lateral parts of the head, and fractures of the base; and first of the former:—In addition to cases I have treated myself, I have the particulars of 187. In 84 of these

the fracture was situated in one of the parietal bones; in 57 the frontal; in 9 the occipital; and in 37, two bones of the calvaria or lateral regions of the head were implicated, or the precise part of the skull-cap was not specified.

The mortality in these several localities was as follows:—most serious of the last mentioned—out of 37 cases, 22 died; then in fractures of the occiput—of 9 cases, 5 died; next we have injury to the frontal bone—of 57, 25 died, and one remained under treatment. Fractures of the parietal bones were most numerous and least fatal, as of 84 cases, 34 died, and one remained under treatment. As a summary we have 86 deaths; 99 recoveries; and two undisposed of, in a total of 187 cases, being 46 per cent. of deaths. A question has occasionally arisen, which are the most fatal fractures of the superior region of the head? The above shows that injuries to the posterior region are most, and to the superior least dangerous; and that fractures of the frontal occupy the middle place in danger as in frequency.

Of the 187 cases the bone was depressed in 149. Should the bone be elevated in every such case? should elevation be performed on the occurrence of reaction, whether symptoms of compression are present or not? or would the prospect be more satisfactory by delaying till well marked signs of pressure are exhibited? does the age of the patient modify in any way our opinion?

On reference to some of the older writers, as Pott and O'Halloran, we find that every case of fracture, with depression, was considered fit for the trepan. In the introductory observations to his work on injuries of the head, published in 1793, the latter writer lets us know, in his quaint style, how frequently he was called on to perform this operation, he writes:—" I have had no less than four fractured skulls to trepan on a May morning, and frequently one or two. In the course of above thirty-five years practice, I may safely affirm, because truly, that on an average, one month with another, from three to four cases have fallen to my share, of either fractures, concussions of the brain, or extravasations."[a] Again he says, " Every fracture with depression necessarily demands the operation; and though some particular cases may be adduced, when nature has somehow or other brought about the business of healing, yet it is by no means to be trusted to; and the surgeon is inexcusable who fails to attempt, at least to propose and press it. Simple fractures

[a] Introduction, p. 5.

of the cranium, with depression, when relieved on the spot, or in the space of two or three days, almost always terminate happily. In the course of more than 200 accidents of this simple kind, I cannot recollect a failure in a single instance."

" Fractures without depression do not demand operation."[a] Pott considers all depressed fractures require operation; and nearly all undepressed, also require the interference of the surgeon. He says, "perforation is absolutely necessary in seven cases out of ten, of simple undepressed fractures of the skull. Let us for a moment inquire why it is so. The reasons for trepanning in these cases are, first, the immediate relief of present symptoms arising from pressure of extravasated fluid; or second, the discharge of matter formed between the skull and dura mater, in consequence of inflammation; or third, the prevention of such mischief as experience has shown, may, most probably, be expected from such kind of violence offered to the last mentioned membrane. These are the only reasons that can be given for perforating the skull in the case of an undepressed fracture; and very good and very justifiable reasons they are, but not drawn from the fracture."[b]

In another place he says, " I have no doubt that although by establishing it as a general rule, to perforate in all cases, some few would now and then be subject to the operation, who might have done very well without it; yet, by the same practice, many a valuable life would be preserved, which must inevitably be lost without it, there being no degree of comparison between the good to be derived from it when used early as a preventative, and what may be expected if it be deferred till an inflammation of the dura mater, and a symptomatic fever make it necessary."[c]

I find elevation of depressed bone was practised in 124 of the cases I have tabulated, of these 60 died; 62 recovered; and 2 remained under treatment; as nearly as possible the deaths were 50 per cent.

In 25 cases of fracture with depression, no operation was performed. On analysis of the symptoms of those who recovered— one had profound insensibility; another was insensible and convulsed; another had partial paralysis; the remainder were partially insensible, or had threatened inflammation in the head. Of those who died the symptoms recorded are:—insensibility in one; paralysis in another; epileptic fits in a third; (I use the expressions of

[a] Introduction, p. 31.          [b] Vol. I., p. 104.
[c] Page 111.

the reporters,) 7 died; 18 recovered: being a mortality of 28 per cent.

*Some interesting Cases of Fracture of the Calvaria with Depression,* have come under my observation in hospital:—

A lad 16 years of age, while engaged at work in one of the ship yards, received a blow on the side of the head from a heavy piece of timber which had fallen a height of 10 or 12 feet; when brought to hospital we were informed he had vomited a large quantity of blood; he laboured under collapse first, then concussion; on careful examination of the head (there was no scalp wound,) a fissure extended from the left parietal protuberance forwards for about one and a half inch, bifurcated, producing the shape of the letter Y; the piece of bone between the limbs of the letter, and also, one margin of the fissure, in its posterior part, were depressed, I would say rather more than the thickness of a half-crown. The symptoms of concussion yielded after a time, and were followed by cerebral irritation, and inflammation of a not very intense form. When convalescent I felt dissatisfied with his stolid stupid manner, but learned from his friends he was of a sulky disposition, and that his mind and character were as before the accident. The treatment adopted was cold applied to the head, mercury in small doses, until the constitutional effect was produced, and when necessary, purgatives.

In this case, from the vomiting of blood, I feared more serious mischief than the fissure of a small portion of bone. The possibilities of fractured base, or of injury to the liver, or some important abdominal organ, suggested themselves; but when hours passed by and full reaction was established without its recurrence, my attention was fully turned to the concussion; as it subsided from the depression of bone, I looked for the appearance of symptoms of compression—had such manifested themselves, I would have cut down and raised the bone.

A few days after the admission of the last, a boy, aged 13 years, came under treatment. Two evenings previously, while seeking for a ball, he had fallen from a man's shoulders and alighted on his head; he is reported to have been insensible for a short time, and on recovery to have vomited repeatedly, and complained of pain in the part injured, with general headache and sickness of stomach. On admission the head was shaved, no wound or abrasion was visible, but a fissure of the skull, as in the other case, was felt, extending from the left parietal protuberance forwards almost to the

anterior border of the bone; the upper margin of this was depressed to about the same extent as in the other case.

I placed him on low diet, gave him some alterative doses of mercury, and kept him in hospital for a time.

Here we have one of those most infrequent cases—a grave injury followed by most trifling constitutional disturbance; in fact, from the time he came under my care he was well—all headache, &c., &c., had passed off. My treatment was merely precautionary.

Again, about a week later, a fine boy, about eight years old, was brought to hospital—a log of timber had fallen on him, fracturing the right forearm very severely, and causing a wound which commenced at the right frontal protuberance and stretched upwards and backwards about four and a-half inches in length; the scalp was separated to a considerable extent, and a fracture, parallel to the wound, occupied fully three inches of the frontal and a small portion of the parietal bones; there was depression to fully the thickness of the skull. In the unavoidable absence of my colleague on duty, I saw him about an hour after admission. Bodily warmth was then restored, his pulse and respiration were slow; pupils dilated, uninfluenced by light; he lay quietly, head resting on the right (the injured) side; when turned on the left side he gave a fretful cry and endeavoured to replace it; by sharp speaking or pinching he could be partially aroused—give a monosyllabic answer, and then sink back into insensibility. The house surgeon informed me, half an hour before my visit he could be roused with much greater facility, when he gave his name, residence, &c., &c. That I might have an opportunity of noting the increase of the coma, I deferred operative interference for an hour, when I returned and examined him, and was satisfied the insensibility was greater than before.

I then had him removed to the theatre for the purpose of operation; immediately before commencing, I again essayed to arouse him, when suddenly he opened his eyes and answered quite collectedly, although slowly and rather stupidly. Under these circumstances I did not deem it necessary to raise the depressed bone.

The boy passed to the care of my colleague; he laboured under concussion for a time, and gradually recovered. He was discharged in seven weeks.

This was to me a most interesting case; had the profound insensibility, which was twice so marked, continued, my treatment would have been elevation of the bone with Hey's saw, if possible, if not, by the trephine first, then the saw. The occurrence of insensibility,

followed by a state from which he could be aroused, I believe, was due to cerebral congestion, for, after severe injury the circulation is embarrassed and imperfectly performed; and, I have several times noticed, although not so well marked as in this case, the insensibility sometimes more, sometimes less profound, without any apparent cause.

Ten months ago, a boy, 16 years of age, fell a height of 12 feet in the hold of a ship on Queen's Island, he alighted on the posterior part of his vertex. I was in the hospital on his admission, and was informed that he was insensible for a period of about 10 minutes after the accident, but from the time he was placed in the ferry boat until his arrival here, he was perfectly collected. There was a wound one and a-half inch long, situated over the upper part of the occipital bone; almost at the summit of that bone a V shaped fracture was seen, the point directed upwards; the limbs were each about one inch long; the bone was depressed fully the thickness of two half-crowns; he merely laboured under collapse, and was quite astonished when I ordered him to bed. The wound healed up, and he was discharged in a month.

I saw him six months afterwards, he had not experienced the slightest bad effects from the fracture.

This is another example of a most serious injury without the appearance of a single bad effect—in fact, so well did he feel, I had considerable difficulty in keeping him in hospital for a reasonable time.

Is the danger to the patient increased by cutting down to make an examination merely of the site of fracture—by, in fact, rendering the fracture which was simple, compound? Most surgeons are opposed to this treatment, Sir Astley Cooper, in his forcible language, says, " the man who would do so should be cut for the simples." Mr. Guthrie and others do not consider the patient's danger is in any way increased by it.

I believe the principal advantage to be attained by it is, that we can ascertain more accurately the extent to which the cranium may be fissured, and the amount of depression of the outer table; also, if death of a piece of bone is about to take place we are made cognizant of the fact at an early period by its altered appearance. Although I would not practice it heedlessly, or without due consideration, I should have no hesitation in cutting down, provided I was uncertain as to the extent or amount of the depression of bone.

Of fractures without depression we have reports of 38 cases, of

which number 25 were subjected to operation and 13 were not; of
the former 13 died, 12 recovered; of the latter 5 died, 8 recovered.
Among those subjected to operation, we have 3 cases of paralysis;
5 more or less convulsed or with epileptiform fits; 4 insensible;
3 of compression; 3 of encephalic inflammation; and, what I con-
sider strange, 5 are marked as labouring under very slight symp-
toms or none at all. Those not submitted to operation suffered
from slight concussion, collapse, effects of shock, &c., &c. One, a
recovery, had epileptic fits.

In December, 1858, I brought before the notice of the Belfast
Clinical and Pathological Society, some cases of fracture of the
skull. One was a patient with fissure of the frontal bone. In
giving a brief account of his case, I stated, he laboured under
paralysis which gradually became general. Under treatment this
slowly passed off, and he was discharged from hospital quite
restored. Twelve months after, this man came under the care of
one of my colleagues, he had fallen into a vat of boiling ley in a
bleaching establishment. He told me he had enjoyed excellent
health since his dismissal; he had not suffered from headache, loss
of power, or any effect of his injury. In a few days after his
second admission he was attacked with tetanus, and died. I made
an examination of the head and removed the portion of the calvaria
which had been fractured, and which was completely united. The
dura mater was most intimately adherent to the bone in the
vicinity of the fractured part. The brain, &c., &c., were perfectly
normal.

A man, aged 22, had the upper part of his occipital bone frac-
tured by a heavy piece of iron falling on him, from a height of 12
or 14 feet When admitted he laboured under the ordinary symp-
toms of collapse; then well marked concussion. The fissure of the
bone could be readily detected at the bottom of an extensive wound.
There was no depression. In a month he was discharged from
hospital perfectly well. The case was an average one, without the
appearance of a single peculiar or anomalous symptom.

Thirty-four cases with depressed bone, although not labouring
under symptoms of compression, were operated on; of these, 22
recovered, 12 died. As many of the contributors do not mention
the symptoms (if any) which existed before operation, I have no
doubt, this series should be much greater. I have, however, merely
tabulated those in which the writer distinctly records the absence
of compression.

I must confess my inability to understand the indication for the use of the trephine or saw, where the report states the patient was " sensible " or had no symptoms of compression. And, although I find this practice has been followed by some surgeons, I would not pursue it, therefore, cannot commend it. I consider, at all times, even in the hands of the most skilful, the use of the trephine must expose the patient to considerable risk of encephalic inflammation, and, that we are not justified in operating as a mere precautionary measure, but only in those cases, in which, from symptoms of compression, we have reason to believe there is pressure on the brain which may be relieved by interference.

There may be an exception to this rule, as occurs frequently in military practice, a bullet producing what might be styled an indented or stellate fracture; or in civil practice, a blow from the sharp angle of a brick or slate, driving in the outer table and breaking the inner to a greater extent. Here we might expect pressure on the brain or more extensive laceration of the membranes than the slightly depressed condition of the outer table would indicate; in such a case the appearance of less urgent symptoms, as convulsive twitchings, epileptiform seizures, would be a sufficient warrantry for the use of the trephine.

I may here appropriately refer to the question of the frangibility of the tables of the skull. For many years my anatomical experience made me look with considerable doubt on the generally received opinion, that the inner table is so much more easily fractured than the outer. I often observed, if great violence be applied to a skull-cap, the tables would be fractured to about the same extent. In 1858, in a most valuable series of lectures, delivered in the College of Surgeons, England, Mr. Prescott Hewett, not only noticed this, but carried his observations further, he found where violence is applied from within outwards, the outer table is usually injured more extensively than the inner—if from without inwards, the reverse; where great force is used, both will be broken to about the same extent. On reading his remarks I tried these experiments repeatedly, and believe his statements are correct. If, then, an individual has fallen from a great height, alighting on his head, or has received a fracture in some other way, from great violence, I would anticipate the tables of his skull would be broken to the same, or nearly the same extent, but, if a less force were applied to a small surface, I would dread splintering of the inner table.

Another question of interest is that of injury to the brain.

We all know the prospect is much brighter where bone is merely depressed without lacerating the dura mater; and injury to that membrane is less fatal than where some of the cerebral texture is torn, and possibly protruding from the wound. Some of the most experienced surgical writers look upon this latter form of injury *as almost* necessarily fatal—the mortality is very large—and yet many recover. I have made a distinction between protrusion of the brain and hernia cerebri, as it is at times called, on the one hand, and simple wound or laceration on the other. Where wound of brain has terminated in hernia, I have placed the case under the former head.

Of cases styled protrusion or hernia, there were 35 reported—17 died, 18 recovered. Of wound or laceration, 27 cases—18 died, 9 recovered; total, 62 cases, with 35 deaths. Of these, 9 had more or less of paralysis or convulsive twitchings; 7 symptoms of inflammation of varying degrees of intensity; 9 compression, the majority well marked, although some were not very profound. Then we have concussion, collapse, and shock; several described as not labouring under any symptoms; and some, in which the reporter mentions many of the leading features, but does not state this particular.

On looking at the mortality as it occurred at the different periods of life, we find up to the age of 10 years, inclusive, there were 24 cases with 9 deaths; between 10 and 20, 49 fractures, with 16 of a mortality; from 30 to 40, 86 cases, 48 fatal; and from 40 to 60, 24 with 10 deaths; two had not terminated when their reports appeared.

I do not consider it necessary to give an analysis of the plans of treatment pursued. In a considerable proportion indeed, the writers seem to have considered the indications so obvious, as not to have recorded it at length. I would merely observe, venesection was practised in 24 cases only. A marked contrast to the custom of the older writers, and also to the injunctions of many within a very recent period. Tartrate of antimony also seemed to be at a discount, for I find it was used in three instances only. The preparations of mercury were most generally employed, in some, merely as purgatives, in a considerable number until the constitutional effect was produced.

I would briefly sum up my views of fractures of the calvaria. The most dangerous are those of the occipital; the frontal next in order; the parietal least so.

The mortality in fissure of the calvaria and depressed fracture is nearly equal, considering all the cases.  But take all the cases, whether depressed or not, in which operation was performed, the death rate was 50 per cent.  All the cases where no operation was performed, the per centage was about 34; or if we contrast those cases in which there was depression but no operation, the mortality was 28 per cent.; with those also depressed and operated on without any symptoms, the deaths were 36 per cent.  These facts must, I consider, point to the conclusion, that operative measures should only be used as a *dernier ressort*.

The cases of fracture without depression subject to operation, showed a mortality of 52 per cent.  Similar cases not operated on, presented 33 per cent. of deaths.  In cases of injury to the brain, the mortality was about 43 per cent.  Operation is fully warranted when the injury is of the indented class already referred to.

In simple fracture, where there exists a doubt as to the extent of the depression, I consider the surgeon adds extremely little, if anything, to the risk of his patient by cutting down.  Fractures are borne with greatest immunity in the first and second decennial periods.  The danger to life is greatly increased in the third and fourth, and again diminished in the fifth and sixth periods.  I have given a brief report of six cases of fracture of the calvaria with recovery in each.  In two of these the occipital—in two the parietal—and in one the frontal were broken—and in one case the frontal and parietal were both involved.

I have examined the reports of 66 cases of fracture of the base of the skull.  Of this number, 46 died, 20 were restored; about 69 per cent., an enormous death rate.

When we consider the great injury inflicted on parts so nigh to the most essential portions of the nervous system, generally themselves sufferers from laceration or extravasation, and the uncertainty which surrounds the recognition of these fractures during life, we need not feel surprise at the short list of authenticated recoveries.

In those injuries hitherto considered we had, generally, *tangible* and frequently *visual* evidence of their existence.  In the present class, during life, in many cases we are dependent for our prognosis on symptoms which bear no proportion to the amount of fracture sustained.

As an illustration, I would mention the following:—Within half an hour of the admission of the boy with compound fracture of the frontal and parietal bones, whose case I have related just now,

a man, aged 60, was also admitted to hospital. While engaged
white-washing a house, on a ladder about 20 feet high, a sudden
gust of wind precipitated him to the ground. When I saw him
about half an hour after admission, the surface was cool, not cold;
he was *perfectly* collected; described how he had been engaged
before his fall; said he was insensible until shortly before his admis-
sion; complained of pain across the temples. I noticed he was
somewhat (a little) deaf; I asked was this the result of his injury,
he stated he had been deaf for many years—he had bled from the
right ear; but when I visited him within an hour of the accident
the hemorrhage had ceased, and there was a little dried encrusted
blood in the meatus externus.

Immediately after leaving the bed, the house surgeon, in conver-
sation, suggested the existence of fracture of the base. My reply
was, it may be present, but if we have not an opportunity of exami-
nation we are not warranted in placing the case on record as one of
this injury.

This, with the other patient, passed to the care of my colleague
on his return to town. Frequently, when in the ward, I spoke to
the man; his mind was quite clear; he many times complained of
being deprived of his snuff box. The only circumstance which
attracted my attention was, he always lay on his back, and com-
plained of pain in his head if the nurse turned him on his side.
Until three days before his death, when he had symptoms of enceph-
alic inflammation, his mind was perfectly clear. Death occurred
ten days after admission.

I was not present at the *post mortem*, but was informed the
brain showed evidence of inflammation, and a fracture passed
through the right petrous bone, without involving the tympanum.

Now, I consider the absence of all head symptoms fully war-
ranted the opinion I expressed. The small quantity of blood which
flowed from the ear was of no value as a diagnostic, and the trifling
complaints of the patient might readily be caused by contusion.

I consider these two cases are worthy of being placed on record.
First, a sailor, 20 years of age, was admitted on 16th June, 1859.
While intoxicated he had fallen into the hold of his vessel, a height
of 12 or 14 feet, alighting on his head, and receiving a fracture on
the left side of his forehead from the sharp angle of a brick. The
fissured condition of the bone was visible at the bottom of an exten-
sive scalp wound, it stretched down to the supra orbital foramen,
and was of a † shape. The amount of insensibility was only partial,

as he could tell his name and age. His breathing was natural; pulse 60; skin cool; on being let alone he turned off to sleep immediately. There were two small contused wounds on the left side of the face, one beneath the outer, the other beneath the inner canthus; for some hours continuous bleeding poured from these wounds, followed, for 24 hours, by *copious weeping of serum*. There was considerable extravasation of blood behind the left ocular conjunctiva, and the eye-lids were very much ecchymosed. From this I diagnosed that the fracture, which was traced to the supra orbital foramen, extensively involved the roof of the orbit. I also considered the serum was arachnoidean which had passed behind the ball, and made its way out by these wounds. On the 18th, he had well marked symptoms of inflammation of the encephalon; on the 21st, he had paralysis of the right side; he died on the 25th—nine days from the injury. Insensibility was almost complete after the first day.

I made a *post mortem* $12\frac{1}{2}$ hours after death. A large collection of pus occupied the cavity of the arachnoid anterior to the left hemisphere; the arachnoid, especially in the neighbourhood of the superior longitudinal sinus, was thickened and opaque; general vascularity of the pia mater. On removing the brain, two clots, each about the size of a shilling, were found, one on the roof of the left orbit, the other in the middle fossa of the left side; the brain substance was normal in consistence, but highly vascular in all parts, both cortical and medullary. The fracture in the calvaria was more extensive on the inner than the outer table, without depression, extending from below the left frontal eminence to the margin of the orbit at the supra orbital foramen, in length, say one and three-quarters inch; a similar fissure extended across the top of this, at right angles, producing a T shape. In the base the fracture stretched backwards, from the supra orbital foramen through the roof of the orbit, completely breaking away a piece of bone, nearly circular in shape, of the size of a shilling, rather internal to the centre of the orbital roof; this could be readily removed by the forceps; the continuation of the fracture extended from the left towards the right side, through the olivary process and body of the sphenoid bone, into the right side of the basilar portion of the occipital, terminating half-inch anterior to the foramen magnum. None of the other cavities were examined.

The extravasation beneath the conjunctiva enabled me to express the opinion that the fracture extensively involved the roof of the

orbit. The weeping of serum also pointed to fracture of the base. I had never witnessed it from this situation, nor do I recollect having seen it recorded—I think it must be infrequent.

The second case was somewhat similar:—On 11th May, last year, a man, 19 years of age, fell from a scaffold 20 feet high, alighting on his head. On admission he had bleeding from the left ear and nose; he had also extravasation of blood beneath the left ocular conjunctiva; he had symptoms of collapse first; then concussion; during the day he several times vomited blood. As the effects of the concussion passed off in the evening and early part of the night, he was not only able to answer questions, but manifested curiosity as to where he was; how the accident occurred, &c., &c. This continued till within an hour of his death, which took place 13½ hours after the accident. On examination, two fractures extended from the left frontal eminence downwards; one in front of the external angular process, the other behind it; the brain was considerably congested, but was not lacerated or injured in any part; a small extravasated spot was on the most prominent portion of the middle lobe of the left side; another over the superior vermiform process of the cerebellum; and a third on the upper surface of the tentorium, near the right perpendicular semi-circular canal; the brain substance was healthy.

There were two fractures in the roof of the orbit—one at its fore, the other at its back part; both were connected with the fissure which stretched down the forehead; two also ran in the middle fossa and terminated at the foramen ovale. Here the bleeding from the ear and nose, with the vomiting of blood, pointed to the existence of fracture of the base; the extravasation behind the conjunctiva, to injury of the orbital roof.

In the former case, the fracture stretched into each of the three fossæ, in this the anterior and middle were involved.

Two other instances of extensive fracture of the base came under my notice. One, an elderly man, was knocked down in the street by a blow from the shaft of a car, he lived five days. On *post mortem* at least one ounce of blood lay between the dura mater and the skull-cap; there were three clots on the surface of the brain, and there was laceration of the grey matter on that portion of the middle lobe which occupies the middle fossa; the calvaria was most extensively broken, and the anterior and middle fossæ fractured. The other, also an elderly man, had fallen down the cabin stairs of a steam boat, a height of about 12 feet; he lived 24 hours. On

*post mortem* the condition of the brain and membranes was much the same as just described; there was no fracture of the calvaria; in the base the middle fossa was extensively broken, and the lesser wing of the sphenoid chipped off. I do not give the details—as neither of these cases presented features of much interest, but place them on record for future statistical inquirers.

From the accounts of the *post mortem* examinations, the following were the situations of the fractures:—Of the middle fossa alone there were 11 cases; of the anterior 10; of the posterior 2; of the anterior and middle 4; of the posterior and middle 9; one of these had separation of the coronal suture. There were 5 cases of fracture running into each of the three fossæ; three of these had, in addition, separation of the coronal suture. There were 5 cases in which the precise locality is not described. On analysis of the fatal cases, we may fairly exclude the following, when considering the per centage of mortality. First, a case of fracture of middle and posterior fossæ, with fracture of some of the lumbar vertebræ; second, fracture of the anterior fossa, and of the seventh cervical vetebra; third, fracture of middle and posterior fossæ, with fracture of several ribs and other injuries.

In such instances the serious injuries mentioned would of themselves suffice to cause fatal issue.

Again we have unusual, and I may say, necessarily fatal cases, such as a piece of nail-rod penetrating the roof of the orbit, lacerating the brain, and causing copious hemorrhage by rupture of the anterior cerebral artery.

The extremity of a walking-cane passing through the nostril, perforating the ethmoid and sphenoid bones, and impacted in the lower part of the brain.

Brass ferrule of an umbrella perforating the roof of the orbit and impacted in the brain—and a piece of tobacco pipe lodged in the same locality. The last three were only discovered on *post mortem.* In all, 7 to be deducted from the number of 46 deaths, which would leave 39. Add to these the 5 cases I have now recorded. This would leave the mortality as already stated. I have brought forward some of, to me, the most interesting matters connected with 193 fractures of the calvaria, and 71 fractures of the base of the skull. In all, 264 cases. Many of the matters I have only touched upon would, I know, supply ample material for valuable papers.

Art. XI.—*Hospital Reports.*  By John Hughes, M.D., Senior
Physician to the Mater Misericordiæ Hospital.

Case I.—*Malignant Disease of the Cecum, and Fatal Obstruction of
the Bowels.*

Anne Neilan, an unmarried woman, aged 32, was admitted into
hospital on 24th October, complaining of constipation of the bowels,
which resisted the action of medicine for the previous 10 or 12
days, accompanied by vomiting, loss of appetite, and general pros-
tration.  She was very low and desponding; having a small weak
pulse, and complained of pain in the abdomen.  She told us her
stomach was deranged for some time; that she suffered much, of
late, from flatulent distention of the bowels and eructation of air;
and that, although she took a quantity of medicine, her bowels,
habitually costive, were not moved for the last 10 days.

The tongue was clean, moist, and firm; the lips and cheeks were
remarkably florid; the skin cool; the urine natural; in fact there
was a complete absence of fever.  The pulse was small, weak, but
not very frequent—only 80 in the minute.

The abdomen was full, resonant on percussion in the umbilical
region, but not tender to the touch.  She could bear pressure over
every part of it; and the most careful examination failed in dis-
covering anything abnormal.  The stomach was, however, very
irritable, and almost everything taken was quickly rejected; never-
theless we indulged in the hope that nothing more serious existed
than a temporary obstruction from accumulated feces in some portion
of the canal; and the comparative mildness of the symptoms did not
tend to discourage such an impression.

After her admission, a mixture containing a saline purgative was
ordered to be taken every third hour until the bowels were moved; at
the same time small quantities of ice were given to allay the vomiting;
and light nourishment was directed as soon as the stomach became
tolerant of food.  The medicine acted with partial success, and two
or three small fecal discharges were obtained, rather fluid, but
natural in colour, to the great relief of the patient.  The vomiting
was allayed, and she appeared better; but in a few days all the
previous symptoms reappeared; the vomiting returned; and the
pain was increased, and now located in the right iliac region.  She
described it as being very severe, and coming on in paroxysms; but

not materially aggravated by pressure; and there was no fever. Again a most careful examination was made, but no hernial or other tumour could be discovered.

The rectum was explored, but no hemorrhoidal or other tumour existed; and the long tube passed readily into the gut, proving there was no stricture there.

The appearance of the abdomen, however, was very peculiar. It was rather flat, knotty, and uneven, presenting a series of inequalities. The form of the intestines could be seen, apparently knotted and twisted together, and they felt full of fecal matter, which a strong and continuous vermicular action tried to force onwards without success.

It was quite plain a most serious obstruction did exist somewhere, and the question came to be discussed—" What was its nature ?" That it was not of an inflammatory character was evident from the absence of constitutional disturbance; but whether it arose from the pressure of a tumour upon the intestinal tube, from cancer of the intestine itself, or from introsusception, we could not determine. Fearing, however, there might possibly be some local inflammation, however slight, I determined to give my patient the benefit of the doubt, and ordered mercury with opium, internally, and counter-irritation. Some transient relief followed; but no medicine could be persevered in, as the stomach was so irritable everything was rejected almost as soon as it was taken.

For some days she continued in a state of alternate ease and suffering, and without any evacuation from the bowels, although they could be readily seen and felt loaded with their contents, and striving to force a passage onwards. Even the enemata, which were often repeated, brought away no fecal matter.

On the 2nd November—nine days after her admission—she felt more depressed than usual, and said her stomach was very sick, and had been so during the previous night. While she was answering my inquiries vomiting occurred, and a large quantity of fluid feces (certainly more than a pint) was expelled through the mouth. Every one present recognised the peculiar odour of fecal discharges, and so did the patient herself; for while expressing her great relief by the occurrence, she complained of the manner in which it was accomplished. During a few days after this she was easier, and appeared to rally. She took some nourishing broths, and the stomach was quiet.

But the amendment was only temporary. The vomiting and pain

returned with greater violence than before, and symptoms of typhoid peritonitis set in. The abdomen became very tender to the touch, all over. The tongue was dry and black; the pulse was scarcely perceptible; delirium set in, and the patient so rapidly sank that we imagined a rupture of the intestine and extravasation into the peritoneum had taken place, as a result of the violent and continued efforts to get rid of its contents. Such, however, did not happen, as was afterwards shown.

During this woman's illness, in the hospital, her case excited a good deal of interest—more especially after the fecal vomiting occurred; and some of my colleagues kindly saw her, with me, during the last days of her life. Every known cause likely to produce obstruction of the bowels was discussed; but the weight of opinion was against malignant disease, owing to the age, and particularly the appearance of the patient.

A *post mortem* examination was made 24 hours after death, and, on exposing the abdominal cavity, we found the small intestine full and loaded with feculent matter; the peritoneum showed signs of recent inflammation of a low character, and contained a small quantity of sero-purulent fluid, somewhat resembling *pea-soup*, but there were no adhesions. The intestine itself was of a dark red colour, and its texture was readily broken through; but there was *no rupture of its coats*, nor any extravasation of its contents within the peritoneal sac.

On removing the intestines, we found the ilium, especially towards its termination, very much enlarged—probably to three times its natural size—and containing feces which assumed a firmer consistence as we approached the cecum, where the obstruction was situated. Here we found the canal, quite impervious, and the iliocecal valve surrounded by cancerous deposit, so as to block up the tube, and prevent the passage of the contents of the bowels. The stricture was so close that water poured into the intestine could not pass freely. There were also small round cancerous spots, about the size of a split pea, in the walls of the intestine, immediately near the valve, and the lumbar glands were affected; but beyond this there was no appearance of cancer in any other part or organ. Below the point of obstruction the large intestine was remarkably narrowed in calibre, and contained no fecal matter; but we found in it a portion of the enema, which had penetrated as far as the caput coli.

This case, interesting in many points of view, is peculiarly so

because of the absence of those constitutional signs which announce to us the existence of organic disease, particularly cancer. No one who saw this patient, and beheld her florid complexion and healthy appearance, could imagine she was labouring under a form of disease almost invariably associated with the anemic condition and peculiarly unhealthy aspect; and the only way I can account for the anomaly is, that perhaps the disease was of recent origin, and had not existed long enough to produce those changes so characteristic of cancer.

In a case, recorded by the late Dr. Todd, of a similar affection, the patient, who suffered a long time, was *remarkably pallid*—so much so, he says, as to attract the attention of those who entered the ward. And this anemic state existed although " the ordinary functions of the body were properly carried on, the circulation appeared healthy, there were no symptoms of dyspepsia, the bowels acted freely, the kidneys secreted as in health, and the usual quantity of urine was secreted; no fault of the catamenial function existed adequate to explain the anemic condition. There was no hemorrhage of any kind, nor any exposure to miasmata."

But this anemic appearance unaccounted for by any other cause, was of itself sufficient to lead Dr. Todd to the conclusion that his patient suffered from *malignant* or *cancerous disease*, although her age was only 30. And the *post mortem* examination proved he was quite right. It cannot be doubted that pallor of the surface is a prominent sign of cancerous disease; and the opposite condition in the present case is very singular, and probably only to be accounted for by its brief duration, owing to the mode in which the functions of the alimentary tube were interrupted.

This blocking up of the canal, too, is by no means the ordinary effect of cancer of the cecum; for in Dr. Todd's patient, who was under his observation many months, he says the bowels acted freely; and the examination, after death, showed there was a perfect freedom of transit for the intestinal contents through the cavity of the cecum. The cecum was reduced in size, and the caput coli was almost obliterated, so that the channel between the ileo-cecal valve (of which one lip still remained) and the ascending colon was exceedingly short; thus the action of the ilium was of itself sufficient to propel the contents of the bowels into the colon, and any accumulation was prevented. So, also, in a case reported, in the *Med. and Phys. Journal*, by Dr. T. E. Beesley, the passage was larger than is usual in health, notwithstanding a great thickening of the parieties.

The diagnosis of this case was extremely difficult and obscure. In Dr. Todd's case there was the peculiar anemic condition which led to the suspicion of malignant disease; and there existed, besides, a tumour in the right iliac region, and severe lancinating pain in that locality; but we had no anemia, no decided permanent pain, and no perceptible tumour; for it can be easily understood how the distended intestines would prevent its being felt had it existed. But in fact the cancer had not attained a size sufficient to make it perceptible, and consequently we possessed no data on which to base a satisfactory diagnosis as to the cause of the obstruction.

It was singular, indeed, how little febrile disturbance was present in this case, and how a condition of almost perfect ease and relief alternated with paroxysms of suffering—a relief which always succeeded vomiting; and so decided, that we were beginning to think the case was about to assume a chronic form, and that the contents of the bowels might be evacuated through the stomach, as sometimes happens in cases of obstruction. This belief was strongly increased after the large fecal vomiting which occurred some days before death, and which was followed by so much relief. We know how wonderfully, in some cases, the system accommodates itself to defecation by the mouth. And every one is familiar with the case detailed by Dr. Crampton, in the *Dublin Hospital Reports*, of a young lady who had obstinate constipation and stercoraceous vomiting for several years.

It may be inquired if the operation for artificial anus should not have been tried in this case?

I believe the question could not, with any propriety, be entertained, inasmuch as we could not ascertain the seat or nature of the obstruction; and, moreover, we had presumptive evidence it did not arise from any impediment in the large intestine, as the rectum tube and enemata passed readily into it.

The fecal vomiting in this case was a remarkable phenomenon. Whenever that event occurs from an inversion of the peristaltic action of the intestine, it is stated that in such cases the pressure of the fluids above the ileo-cecal valve and that below it being about equal, the valve becomes flaccid, and an intermixture of fluids takes place, and thus we have fecal vomiting.

But I apprehend the explanation is not satisfactory in this case; for it will be remembered the fecal vomiting did not occur till some days before death, and at a time when we were perfectly satisfied the large intestine was completely emptied by frequent enemata.

I know it is the generally received opinion that the intestinal contents do not become fecal until after they have passed the ileo-cecal valve; and I have heard surgeons more than doubt the occurrence of true fecal vomiting in strangulated hernia, because it is the small intestine which is commonly constricted. But it is quite certain, nevertheless, that true fecal vomiting occurred in this instance, and true feces was found above the valve after death. It occurred to me that probably disease modified the functions of the two portions of the canal; and, under the circumstances, the small intestine assumed the functions of the large in the obstructed state of the canal; or, possibly, that physiologists have not as yet determined with certainty what portion of the intestinal glandular apparatus eliminates that peculiar matter which gives to feces its characteristic odour.

### CASE II.—*Diabetes Mellitus—Saccharine Treatment of.*

The saccharine plan of treating diabetes originated, I believe, in France, and so far back as 1845. Bouchardat gave saccharine fruits in diabetes, and bread made from gluten. Andral and Piorry tried a similar treatment, with some success. And the practice has been recently adopted in England, by Dr. Budd, of Bristol, who has published some cases (two, I think) in which he says the most marked amendment followed the use of sugar. Others have also recorded cases; but they do not exhibit so favourable a result as those of Dr. Budd. It would appear, however, that some practitioners who tried this plan have found it beneficial. Their patients grew fat upon it; and even this effect, in a disease where wasting is so prominent a symptom, is a very desirable result. They say, besides, that the practice is not an irrational one; for Bernard has shown that sugar taken into the stomach, in its passage through the liver, is converted into an emulsive substance, which tends to fatten patients; and he has also proved experimentally, and Andral and others practically, that sugar is secreted and found in the circulation in diabetes, whether the individual be fed upon nitrogenous or amylaceous substances: consequently our old-established plan of dietetics in this disease, with all its restrictions, is useless.

Dr. Budd, one of its earliest advocates in England, says he gives sugar in diabetes on the principle of supplying to the system the particular element which is running to waste, and the loss of which appears to be the principal cause of the damage sustained by the

constitution as the disease advances. On all these grounds, then, it has been considered that the saccharine treatment of diabetes is worthy of a trial.

Amongst the many theories propounded concerning this intractable disease, modern researches incline to the opinion that the liver is the organ in fault—an idea long since entertained by Dr. Prout. Experiments by Bernard and Pavey tend to show that there is always present in the liver, located in the hepatic cells in considerable abundance, a substance which one calls the "glucogenic matter" of the liver, the other "hepatine;" that this substance is, with great facility, by a process allied to fermentation, converted into sugar; but that it seems to have the power, whilst located in the tissues of the living and healthy liver, to resist the transformation. In certain unnatural conditions, however, as well as after death, this power is at an end, and the blood becomes surcharged with saccharine principle.

If this be true, it would appear that the diabetic condition depends upon some functional derangement of the liver, which converts alimentary substances into this glucogenic matter in greater abundance than natural, and allows it to mix with the blood in large quantity, when it immediately becomes converted into sugar, and as such passes off with the urine.

I am not sure, even assuming all this to be correct, whether we are in a better position to decide upon the exact nature of this disease. Probably, however, it is to physiology we shall have to look, in the end, for a solution of this difficult question; for pathology is strangely barren of results in this disease; so much so that it is doubtful whether the presence of sugar in the system either necessarily depends upon, or produces, visible organic lesion of any particular organ. When organic diseases do exist, they are looked upon as merely concurrent affections.

However, it is not my intention to discuss the nature of diabetes mellitus; I merely wish to give a brief account of how this saccharine plan of treatment turned out in my hands, after a trial of more than four months.

Four cases of diabetes mellitus came under my care in hospital, almost simultaneously.

The first was a man named Thomas Ryan, aged 37, who had been diabetic for 13 months before admission, and had been under treatment for his disease during the greater part of that time. On admission he was voiding, daily, eight pints of urine, specific gravity 1049,

and containing 22 grains of sugar in each ounce. He complained of great thirst, languor, and debility; the skin and mucous membrane were dry; the bowels confined; and all the usual symptoms of diabetes were present.

I treated this man with Dover's powder and the vapour bath, for a fortnight, when he left the hospital relieved in respect to the condition of the skin and mucous membrane; his thirst was abated, and the skin was somewhat moist; the quantity of urine varied with the amount of fluid drunk, but its condition was unaltered. He thought he was growing weak, and wished to go home. He told me his father had a complaint similar to his own.

This man returned on the 18th January, and was then voiding 10 pints of urine daily, of a specific gravity 1041, 24 grains of sugar in each ounce. He said he drank a large quantity of beer, one day, at home, and was not as well since. I now determined to put him on the saccharine treatment, and ordered him six ounces of barley sugar daily; diet of fresh meat, with green vegetables and bread; also a moderate quantity of lime-water and milk. He continued this plan steadily for three weeks; and at the end of that period his condition was, to a certain extent, improved. The quantity of urine passed was seven pints, the specific gravity 1041; each ounce contained 24 grains of sugar; and he gained two pounds in weight. The skin was somewhat moist, thirst abated. He was again anxious to return home, and left the hospital.

The second case was a man, aged 40; but as he was not in hospital more than a week, and was treated with sudorifics (Dover's Powder) alone, and almost an exclusively animal diet—I will only refer to his case. In fact, he would not submit to the abstinence from fluids, and the variety of food which I enjoined. He left without any apparent change. There was one fact connected with him of interest—he told us his father had the same ailment he was labouring under, and died of it.

The next patient was a man aged 32 (John O'Neill), who suffered from the complaint for 18 months before admission. On the 3rd January he was voiding 15 pints of urine, of a specific gravity 1043, 18 grains of sugar to the ounce. He was very thin, and had all the symptoms of diabetes in an aggravated form. He was treated with sugar and a mixed diet, like the former patient; and at the end of six weeks his urine was reduced in quantity to six pints—the specific gravity remaining the same. All the other symptoms were greatly relieved, and he felt himself much better and stronger; in fact so

well that he was anxious to go and resume his former employment
(that of a shopman). Yet, on weighing him, we found he had lost
four pounds in weight since his admission, and his urine contained
22 grains of sugar to the ounce. We heard that he since died of
phthisis.

The last and most interesting case is that of Henry M'Nee. He
was a married man, 30 years of age; tall, well-proportioned, and of
a very athletic frame. He was always temperate; had no hereditary
predisposition to the disease, and attributes his illness to profuse
perspirations and alternate chills while working as a railway
labourer. Five years ago, when employed in England, he first
noticed his disease, and was treated for it at the Manchester Infir-
mary. After four months stay in that institution, he left at his
own request, relieved sufficiently to resume his work, at which he
continued for 11 months before admission. At that time he
noticed the aggravation of his disorder, which set in with great
thirst, increased flow of urine, general weakness, and rapid loss of flesh.

On admission, all those symptoms had attained a great intensity.
He said he was only the skeleton of his former self; for, when in
health, he weighed more than 14 stone, and now he did not reach
12; which surprised him, when he could eat so much—four times
his ordinary quantity—and he did not feel sick, only very weak.
He was voiding 10 quarts of urine in 24 hours, of specific gravity
1049, and was obliged to empty the bladder every hour. He
drinks about the same quantity of fluids within the same time.
His urine has an acid reaction, is free from albumen, and each ounce
contains 24 grains of sugar. As an evidence of his broken down
health we found a large, chronic, indolent ulcer over the right ex-
ternal ankle.

I was determined to give the saccharine treatment an uncom-
plicated trial in this case; and, after an aperient, I put the patient
on six ounces of sugar, daily, together with four ounces of treacle;
bread, meat, and green vegetables for diet; lime-water and milk
for drink—with an injunction to limit the amount as much as
possible.

At the end of a month he was somewhat improved. He had
gained two pounds in weight; his thirst and appetite were dimi-
nished; the quantity of urine passed in 24 hours was reduced from
10 to 7 quarts; the specific gravity ranged from 1043 to 1045—26
grains of sugar to the ounce.

During the next month he had two attacks of sudden and violent

sickness of stomach, accompanied with constant vomiting and cramps in the abdomen and legs. He complained, for a few days, of great nausea, and felt as if saturated with sugar; everything, he said, tasted sweet. He was, at the same time, weak. The urine was of a specific gravity of 1044—not lessened in quantity. The ulcer of leg was healed. The sugar treatment was discontinued.

After the lapse of a few days the sugar was again resumed; and his condition, at the end of another month, was as follows:—His weight, 12 stone 11 lb.; consequently he had gained nine pounds since last report. His urine is reduced to three quarts in 24 hours; and he is not disturbed more than once or twice to pass it during the night. His skin is moist; his bowels are regular; he has gained strength, for he is able to work at the force-pump of the hospital for an hour without resting. The specific gravity of the urine is 1035–9, but it contains a *greater amount* of sugar than before. According to Garrod's glucometer each ounce contains 40 grains of sugar. His appetite and thirst have decreased; the ulcer of the leg has broken out again.

After four months stay, he left the hospital in the month of May, and obtained employment as a porter, which obliged him to carry considerable weights; he remained at this work for six months, during which time I saw him occasionally; but at the end of that period he was completely prostrate, and sought relief in another hospital. As the sequel of his case has been published, I will add some extracts from the report:—

He was admitted into Dun's Hospital, under the care of Professor Law, in the month of January, and was then voiding 16 pints of urine in 24 hours—specific gravity 1042. On the 10th of February the quantity of urine was 12 pints—specific gravity 1035–9, and contained 8·750 grains of sugar, or about 45½ grains to an ounce. On the 8th of March the quantity of sugar was 39 grains to the ounce, the amount voided being the same. On the 20th March the quantity of sugar declined to 34 grains; and on the 8th May the urine was reduced to 10 pints; there were 38 grains of sugar in each ounce.

He left the hospital in July; but was again readmitted late in October, in an advanced stage of phthisis; and on the 10th November the *post-mortem* examination showed extensive tubercular disease in both lungs. " Both kidneys were very large; one weighed 12½ ounces, the other 11. Both were much congested, but exhibited no trace of disease or deviation from their normal struc-

ture. The liver was perfectly normal in size and appearance; and, on examination, did not contain a trace of sugar. It was, in fact, to the eye and to chemical analysis a specimen of a healthy liver."

It will be seen from these cases in which the saccharine treatment has had a pretty fair trial that, to say the least, it produced no permanent improvement. The specific gravity of the urine was not altered, and in each instance its saccharine quality was aggravated. Tis true the amount of urine voided within a given period was considerably diminished; but I think that result is very much within the control of the patient, exclusive of medicine. I mean, of course, if he checks his desire for fluids. The gain in weight and the increased strength may be more justly attributed to other causes than to the amount of sugar taken; and I am quite satisfied, so far as my observation enables me to judge, that the saccharine treatment of diabetes is not entitled to the credit which its advocates claim for it. All that can be said for it is, that it is vastly agreeable to patients, and is not positively injurious, as one might *a priori* be inclined to suppose.

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Art. XII.—*On Cellular Polypus of the Ear.* By J. G. Hildige, F.R.C.S.I., Surgeon to the National Eye and Ear Infirmary.

The class of aural polypi comprised under the term " cellular " has not, until a comparatively recent period, been specially noticed by writers on aural surgery. As such polypi differ essentially from all others occupying the external meatus of the ear; and, as they require a totally different treatment, perhaps some remarks concerning them may not be deemed wholly superfluous.

According to my own observation they occur most frequently in persons of a weak anemic constitution, who are obliged to pass most of their time in ill-ventilated rooms, or lead sedentary lives. They may occur almost at any time of life; but, as a general rule, seldom make their appearance after 24 or 25 years of age. They commence insidiously. The patient may have had a slight attack of ear-ache, to which he may trace the commencement of the tumour, or he may attribute it to an injury; in most cases, however, he knows nothing whatever of its existence until he accidentally inserts his finger into the external meatus, and then detects it. From the commencement of the growth it is almost always

accompanied by a slight discharge, which differs from that produced in chronic catarrhal inflammation of the dermoid meatus by its containing flocculi of mucous like small particles of thread.[a]    Little or no pain accompanies this class of polypi, although a pricking sensation is sometimes complained of; but this is generally so trifling that it causes little or no inconvenience to the patient.

According to some writers, these tumours are most frequently attached to the superior or posterior walls of the meatus; and when seated near the orifice, sometimes completely close it up.    They are soft and yielding to the touch; and by using a very slight degree of pressure can be reduced to nearly one half their size; if the pressure be continued for any length of time fainting and insensibility are produced; so that in all probability it was this class of tumour which ancient writers[b] described as having their origin in the brain. The following case, recently under treatment at the National Eye and Ear Infirmary, presented almost all the characteristics of the cellular polypus, although the situation and size of the tumour differed materially from the generality of such cases:—

George K., aged 22, clerk, a pale, unhealthy-looking young man. He states, that six months previously he had an attack of ear-ache in the right ear, which subsided after a few hours' duration, without any particular treatment having been had recourse to.    Ever since that time he has been subject to a slight discharge from the ear, with occasional shooting pains, and gradually increasing deafness. About six weeks ago (December, 1861) he commenced to feel as if his ear were plugged up by a foreign body; which sensation continued increasing until he had become very deaf of that ear, and could no longer introduce the top of his little finger into the orifice of the meatus.    His general health had lately become much impaired. On examination the ear presented the following appearances:—The orifice of the meatus was occupied by a large cone-shaped polypus of a bright reddish colour, which filled up almost the entire calibre of the passage.    It was soft to the touch, and easily compressible. I was somewhat alarmed, however, when, on attempting to push it aside with the forceps, the patient became faint; and a moment or so afterwards he lay down on his back; which position he was obliged to retain for several minutes, until his faintness had passed away.    The polypus was attached by a broad, thick pedicle to the anterior wall of the meatus, about one-eighth of an inch from the

[a] Vide Toynbee on the Diseases of the Ear.
[b] Vide Fabrice de Hilden, Itard, &c.

orifice, the lining of which was considerably congested; there was little or no discharge present, nor had there been any for several days previously. The watch was heard two inches from the ear. The left ear was sympathetically affected, a buzzing noise being continually heard in it; the hearing of it was, however, tolerably good.

I attempted to remove a portion of the tumour with the forceps, but was obliged to desist on account of the extreme fainting fits which the slightest interference with it produced; I therefore contented myself by prescribing a solution of acetate of zinc (a scruple to the ounce) to be applied three times daily to the polypus, the meatus to be previously syringed out with luke-warm water. Four days after the commencement of this treatment the polypus had slightly diminished in size, had become of a greyish colour, and the discharge had not returned; hearing remained in much about the same state, although the patient fancied he could distinguish sounds more clearly. Six days later the polypus had diminished so much that, with a little difficulty, an examination of the membrana tympani was made. It presented all the appearances of extreme congestion, being almost purple in colour. The portion of the meatus in its immediate neighbourhood was also much inflamed, and much narrower than in the normal condition. I prescribed leeches, to be applied to the orifice of the meatus, counter-irritation behind the ear, and the lotion of acetate of zinc to be applied to the tumour as before. Under this treatment the polypus rapidly disappeared, and the hearing improved considerably; but, as the patient discontinued his attendance at hospital before he had quite recovered, I was unable to say whether any permanent alteration in the structure of the tissues entering into the formation of the meatus and membrana tympani had taken place or not.

This case differs materially from the generality of cellular polypoid growths; the result of the treatment, however, proved that it was of this nature, inasmuch as astringent lotions have no effect whatever on the vascular or fibrous polypi which occur in the same situation, while they remove, in a very short space of time, cellular polypi.

Mr. Toynbee, in his work on the *Diseases of the Ear*, describes a form of polypus of the external meatus, which he denominates "globular cellular." He says:—"The third kind of polypus developed in the external meatus is the globular cellular species. I have thus named a growth which essentially differs from those belonging to the preceding classes (*i. e.*, vascular and fibro-gela-

tinous). It consists of a single globular mass, perfectly smooth on the surface, and without any appearance of granulation It is confined to the inner fourth or sixth of the meatus, from the upper part of which it is usually developed, and it hangs down like a curtain, wholly or partially concealing the membrana tympani. It is of a deep red colour, is softer than the ordinary cellular polypus, and does not generally attain a size larger than a small pea. The growth usually occurs in children, or in young persons; it is attended by a mucous discharge, which is often very offensive; and the secretion, like that from other forms of polypus, consists of epidermoid cells, which give a milky appearance to the water after syringing; it also contains fine threads of mucous. This kind of polypus may exist for several years without producing any severe symptoms; and it has not hitherto been distinguished from the other varieties of polypus. . . . The aural disease with which the globular cellular polypus is most likely to be confounded is catarrhal inflammation of the mucous membrane of the tympanum, since in some cases of the latter the mucous membrane is of a deep red colour, and so much tumefied that it projects into the meatus for a line or a line and a half beyond the position occupied by the membrana tympani previous to its destruction. On examining the growth by means of the speculum and lamp it is not easy to determine which of the two diseases is present. The examination of the discharge, however, is sufficient to decide the question; for, although in both affections flocculi mucus is present, that accompanying the polypus is composed of small thread-like particles, while that emanating from the mucous membrane of the tympanum presents large irregular-shaped masses, generally of a yellow colour. The history of the case will also usually aid the surgeon in forming a diagnosis, as the globular-cellular polypus ordinarily appears without the manifestation of any very decided symptoms; perhaps the appearance of the discharge is the first indication of its existence; whereas the affection of the tympanum generally originates in an attack of acute inflammation, and often arises during scarlet fever or measles."

With regard to the faintness and insensibility produced by pressure on the tumour, the same writer remarks:—" These symptoms of cerebral irritation frequently cause great alarm to the patient and his friends, and appear to be the result of pressure of the polypus on the outer surface of the membrana tympani and chain of ossicles, which causes a movement inwards towards the cavity of the vestibule of the inner extremity of the chain, producing continuous

tension of the fluid of the vestibules. This is clearly shown by careful inspection of a specimen, prepared by me for that purpose, by which it is manifest that although there are two articulations between the long process of the malleus and the base of the stapes, yet the slightest movement inward of the *processus longus mallei* causes the base of the stapes to be pressed inwards towards the cavity of the vestibule, and, as has been already stated, pressure on the contents of the vestibule appears to produce results very similar to those of pressure on the brain. According to my own observations the former gives rise to—first, a sensation of noises; secondly, confusion of ideas; thirdly, giddiness and insensibility."

According to my own experience surgical interference is contra-indicated in all polypi of this class where there is tendency to extreme syncope produced by handling the tumour, as in the case I have just related. A highly inflammatory action frequently occurs after such interference, not only in the polypus itself, but also in the dermoid meatus, thus rendering an affection, otherwise comparatively harmless, one of a highly dangerous character, from which the most serious results must be anticipated.

In all probability Itard alludes to this kind of polypus when he states—speaking of polypi in general—that it is only after operative attempts to remove it that injurious consequences—the least of which is permanent deafness—generally occur. He also states, however, that all the polypi which had come under his observation appeared to be of the same nature, and suggested extraction as the only means of removing them.

Long anterior to his time Fabrice de Hilden (in 1604) pointed out the danger *occasionally* consecutive to extraction of aural polypi in general; and in one case quoted by Itard[a] the following extraordinary precautions were taken by the first-named writer in order to counteract any inflammatory symptoms that might arise after the operation. The writer says:—" Le traitement de cette maladie ayant eté fixé au retour de la belle saison, on commença vers la fin de Mars à purger la malade. Le surlendemain, application des ventouses aux epaules, et le jour suivant application d'un seton à la nuque. On fit ensuite usage d'une electuaire tonique, d'apozèmes depuratifs, interrompus, par des purgatifs, en même temps qu'on saupoudrait la tête avec une poudre astringente et aromatique dont on garnissait chaque jour la suture coronale avec

[a] Traite des Maladies de l'Oreille et de l'Audition. Par J. W. G. Itard.

l'attention d'enlever auparavaunt celle qu'on avait mise la veille. Apres ces moyens preparatoires on en vint à l'operation." From this it is obvious that the danger of operative interference with *some* polypi of the ear was known to ancient writers on aural surgery, (although the utility of the above preventive remedies may be called in question); and it was most probably the surgical removal of this class of polypi, which I have been attempting to describe, which was attended with unfortunate results both to patient and surgeon.

Art. XIII.— *Observations on Acute Gangrene, resulting from Compound Fracture of the Leg.* By Samuel G. Wilmot, M.D., F.R.C.S.I., Surgeon to Steevens's Hospital, &c., &c.

Of the many evils following from compound fracture of the leg, none demands a quicker perception, or power of keener penetration on the part of the surgeon, than acute gangrene, especially that of the areolar tissue—genuine constitutional gangrene. The signals which give warning of the impending mischief are sometimes so faint as to admit of their being readily overlooked, and it is often not until the evidences are strongly pronounced that the surgeon becomes aware of their full meaning and takes alarm. This disease proves a foe as stealthy as it is deadly, seldom manifesting itself in open action until it has overcome the vital forces, and left no ground on which it can be attacked. To be able to recognise the first dawning of premonitory symptoms; to correctly interpret early and imperfectly developed manifestations, and not to be misled by phenomena, which, however formidable in appearance, are either accidental complications, or only secondary results, and not *immediate* tokens of the fundamental mischief, are absolute requirements, if the surgeon is to be put on his guard in time, and be prepared for an energetic and decisive line of conduct. Nothing but close observation of a number of such cases can give this necessary discriminating power.

We may divide acute gangrene from compound fracture into three *principal* forms. First, inflammatory gangrene, that which results from intensity of inflammatory action, or from pressure exercised by the effused products of inflammation. Secondly, diffused gangrene of the areolar tissue, the skin being primarily, at

least, not implicated or not necessarily so. Thirdly, limited gangrene of the deep areolar tissue, commencing around the broken fragments.

The two latter forms are *essentially* constitutional, the disease depending not on the degree of violence which the tissue has sustained—not on any excess of action in the part, but on the result of some *vice* or unsoundness of the constitution. To these two forms I shall confine my remarks.

The first kind of constitutional gangrene—the diffused gangrene of the areolar tissue—is comparatively easy of recognition, even in the early stage. The wound on the fourth day, instead of suppurating or exhibiting a tendency thereto, assumes a sloughy aspect, and very quickly a doughy swelling arises around it, which soon crepitates on pressure. The emphysema, preceded by doughy tumefaction, rapidly extends to the knee, and there are few instances in which it does not break through the temporary barrier set by the knee-joint, and running along the course of the femoral vessels, reach the groin. Indeed, I have never seen an instance in which more or less crepitation could not be detected along the line of the femoral vessels, and in very bad and rapidly fatal cases, if there be not actual emphysema much above the groin, the peculiar doughy tumefaction which precedes it is sure to be found over the same side of the abdomen, as high as and even higher than the level of the umbilicus, and passing round to the back.

The gangrene is *essentially* of the areolar tissue, and it may engage the whole of this structure in the limb, or, as is usually the case, only or principally the subcutaneous portion. The skin, for some extent around the wound, frequently dies, but this is no necessary part of the gangrenous action, and never does the sloughing of the integument exhibit the same extent or degree as is observed in ordinary inflammatory gangrene, which involves both skin and areolar tissue at one and the same time. The most striking appearance presented by the limb—almost a characteristic feature of diffused gangrene of the areolar tissue—is a peculiar mottled marbled hue of the skin, especially of that in the vicinity of the wound.

The constitutional symptoms which correspond with the development and spread of the local mischief, are equally formidable and rapid in their course; indeed, long before the disease has extended to the abdomen, the patient becomes utterly prostrated, fatal signs are manifested, and all hopes of saving his life cease. The rapid succession of the local changes, and the readiness with which the

system yields as they advance, render it a matter of extreme difficulty to resort to amputation with any prospect of success. The spread of the local condition on the one hand, and the progress of the general condition on the other, rarely leave a moment available for operation.

Much confusion, and, consequently, uncertainty, in determining the question of amputation in *all forms* of spreading gangrene, have been created by the fact that exactly opposite opinions have been advocated by two equally eminent authorities—Mr. Pott and Baron Larrey—the former laying it down as a law that amputation is inadmissible, unless the gangrene has ceased to spread; the latter inculcating the rule of operating, even though it be extending with rapidity. Most civil surgeons have ranged themselves on the side of Mr. Pott, while military surgeons have, almost invariably, been governed by Baron Larrey's practice. My own experience leads me to espouse Larrey's rather than Pott's view of the question.

Not to operate until the gangrene has been arrested, and the fever has abated, is *apparently* a sound practice; but where is the case of acute traumatic gangrene, whatever its kind or form, in which these two happy events ever occur; if we wait in the vain hope of seeing these expectations realised, we wait to see pass by the only possible moment at which amputation can be satisfactorily performed. To wait watching for the arrest of the gangrene, and, finding the advanced stages of the disease rapidly supervening to rush to the knife, is a course not to be justified, for it can never be attended with successful results.

If amputation is to succeed, it must be performed above the knee and in healthy structures, and the strength must not, as yet, have been far prostrated. To cut through emphysematous structures, and especially to operate when the pulse is irregular, or fluttering, or intermittent; when there is hiccup or other evidences of approaching dissolution, is an act little short of homicide; it is but to add to the sufferer's miseries, and to precipitate his death. It is true that cases are recorded by military surgeons in which, owing to the disease having spread so high, it has become necessary, in the operation, to carry the knife through gangrenous parts, and yet the measure has been attended with success; but these, and all like instances, are not, I feel convinced, examples of the special gangrene to which I have been alluding.

It is not long since my colleague, Dr. Hamilton, was called on to amputate in a case of gangrene of the arm, where there were

tumefaction and crepitation beyond the shoulder-joint, and though the parts cut through were *almost, if not altogether* gangrenous, the patient recovered in the most satisfactory manner. But this case was an example of gangrene arising from a mechanical cause— extensive subfascial extravasation of blood, leading to extreme tension, and consequent arrest of the circulation in the tissues. Here, as also frequently occurs in the case of ordinary inflammatory gangrene, a tumefied and emphysematous condition of remote parts resulted, on the one hand, from passive effusion of the serum the consequence of congestion,—on the other, from the travelling of air along the cells of the areolar tissue from the structures undergoing decomposition. The remote tissues themselves are, therefore, not the seat of actual disease, and are in consequence capable of taking on full reparative action after being divided by the knife.

The case is, however, very different in the form of gangrene, the subject of the present remarks. In it the tumefaction of the areolar tissue, in parts ever so remote from the seat of fracture, is of that peculiar doughy nature, which is an unerring indication that the first step in the process of local death has been made, and the emphysema, which quickly follows, is due to the generation of air in that part of the tissue, and not to its transmission from the parts below.

It follows, then, that in acute diffused gangrene of the areolar tissue following compound fracture of the leg, amputation cannot be resorted to with any solid prospect of success, unless it be performed above the knee, and before the parts there have participated in the gangrenous action, and also before the vital powers have commenced to give way. To hit off this happy moment—this pause in the storm so to speak—is not easy; but, unfortunately, even where we are able to avail ourselves of the desirable period, amputation holds out a meagre chance for the patient. For the gangrene is *constitutional ;* we, therefore, can have no pledge that the disease will not attack the stump, and we have reason to fear that the system will sink under the effort it is called on to make in the endeavour to establish the necessary reparative action.

Yet amputation, when the proper period for its performance can be seized, is not only a justifiable, but a desirable measure, since it offers the only possible chance of safety to the patient.

The second kind of constitutional gangrene—limited gangrene of the deep areolar tissue commencing around the broken fragments— is that to which I wish more especially to direct attention, as it

appears to me either to be in great measure overlooked, or not to be clearly distinguished from the form just described. Yet the two examples differ not only in local character, but in the mode of death, and also as to the version to be given to the question of amputation. It is in a case of this disease, that the possession by the surgeon of those qualities already alluded to is so essential. The disease makes its progress so stealthily, though rapidly, and not until far advanced causing any alarming disturbance of the system, or any very broadly marked local change, that the unobservant or inexperienced practitioner may be completely deceived, and fail to recognise the real state of the case before actual fatal symptoms are pourtrayed. Death is produced by poisoning of the blood from absorption of putrid serum, and this event is quite compatible with a very limited extent of gangrene.

The earliest notice that this kind of gangrene has commenced is given by the wound, on the third or fourth day from the receipt of injury. The lips pout, are thick, and present a peculiar waxy appearance, and along their margin a narrow vesication arises There is no suppuration, and the parts would be perfectly dry, if it were not for the escape of some fetid brown serum, which wells up from between the broken fragments. This condition of the wound is certain evidence that gangrene, of the areolar tissue around the broken fragments, has set in. At this period there is but little general disturbance; the pulse ranges from 80 to 90, soft and full, and the patient does not exhibit signs of much prostration; the constitutional character, however, of the change that has commenced is shown by the jaundiced hue of the skin and conjunctiva, which is always apparent, and the irritability of the stomach, accompanied with sour eructations. If the patient has previously been dyspeptic, these symptoms are apt to be ascribed to the old disorder of the stomach, or to the free use of liquids, in which his thirst induces him to indulge, and thus one source of deception is created.

In less than 24 hours from the supervention of the symptoms just described, the patient's fate is decided. Sometimes suppuration soon sets in, and the slough of areolar tissue escapes with the pus, or through the medium of an abscess formed in some part of the limb; all then goes on satisfactorily. Usually, however, this happy change does not occur; the wound opens out more, the lips become further everted, a bluish line is perceptible where the vesication had existed, and the fetid serous discharge increases, in some instances,

to such an amount as to saturate the bandages and the bed. As these changes proceed the patient complains of less pain, until at length it is altogether absent. The most striking local feature now, and one which makes the case contrast with the form of gangrene last described, is the total absence of any doughy tumefaction; indeed, from first to last, there is neither tension nor swelling of any kind, save some puffiness around the wound, and even crepitation, which can only be elicited by very firm pressure, is not always present. No sloughing of the skin, beyond, at least, the margins of the wound, or what may be the result of the previous mechanical violence, is ever observed in uncomplicated cases of this kind of gangrene. The appearance of the wound and fetid serous discharge at first, and later the constitutional symptoms, are the only means whereby we can recognise sloughing of the deep areolar tissue, and the consequent blood-poisoning.

At the time that the wound, by the fuller development of those characters first observed, gives unequivocal proof that all hope of suppuration occurring is at an end, and the gangrene is spreading, the constitutional symptoms undergo a serious change, and evidence is quickly afforded that the blood has become poisoned to a fatal extent. The pulse, before soft and full, and not exceeding 90 beats in the minute, becomes quick and weak; the vomiting is incessant, being accompanied by hiccup, or, what is worse, a sort of gulping effort; there are insatiable thirst, a dry brown tongue, and a tympanitic state of the abdomen. The yellowness of the skin gains a deeper tint, the features are contracted, and there is a peculiar sunken expression of countenance; the point of the nose, the lips, and one or more other spots on the face, especially over each malar bone, present a congested appearance, and this, mingled with the general yellowness, gives that remarkable leaden hue which was so much looked to by the older surgeons, being considered by them as characteristic of gangrene. As time goes on the fatal symptoms advance. The pulse becomes irregular or intermittent, the patient falls into a cold clammy sweat, he complains of a sense of constriction across the precordium, which is sometimes most distressing; there are jactitation and muttering delirium. Yet when roused he will, in general, answer questions rationally, and is often able to raise himself in bed and take some drink, thus evincing a degree of strength, which inspires false hopes in those incapable of drawing conclusions from the local and general condition of the case. Soon, however, coma comes on, and in a couple of hours closes the scene,

not more than 36 hours having, as a general rule, elapsed from the first announcement, given by the wound, that gangrene of the areolar tissue around the broken fragments had commenced.

The most characteristic local feature, apart from the aspect of the wound, is the absence of swelling, the limb being, to the last, rather soft and flaccid than otherwise, and those of a general character are the incessant vomiting, the yellowness, and later, the leaden shade of the skin of the face, and the abruptness of the supervention of fatal symptoms. In the diffused gangrene death supervenes rapidly, but the transitional steps are comparatively gradual; in the form of gangrene, however, now alluded to, the succession of fatal symptoms, once the blood becomes fully poisoned, is so sudden and abrupt as to take all parties by surprise.

With respect to amputation in this form of gangrene, the question is to be viewed in a particular light. In the diffused gangrene we saw that so long as the vital powers did not sink below a certain point, and the knife could be carried through structures not actually in the process of dying, amputation was a proper measure, and afforded some grounds for expecting a successful result; but in the case of gangrene of the deep areolar tissue, the operation is worse than useless, unless as a *measure of anticipation*, for it is obvious that once the general symptoms give evidence of thorough poisoning of the blood, removal of the source of the mischief comes too late. Yet, to operate before all chance of suppuration being established and the gangrene arrested has passed, would be most unjustifiable: hence closer watching and greater preparedness are called for. After the wound has made the first declaration that sloughing has commenced, however feebly the signs may be manifested—however slight the change—the greatest vigilance is demanded from the surgeon; and if, in a short time, the local features should be more strongly marked, and the pulse become quicker and weaker, and the irritability of stomach continue, we should, without delay, resort to the operation. By temporising we only give time for the morbid poison to be absorbed, and to produce its deadly effect upon the brain and other vital organs. Still, even though the operation be performed at the most appropriate moment, the chance of success it offers is so indifferent as to make it imprudent for the surgeon to urge it too strongly upon the patient or his friends, should he or they exhibit much hesitation in yielding consent.

The inquiry that now arises is this:—Are there any means which the surgeon can adopt calculated to avert or to diminish the risk of

either of these forms of gangrene supervening? I believe a most
essential point is to reduce the bones as speedily as possible, making
the ends smooth and even, and coapting them perfectly. In all
cases where the bone protrudes, whether from direct or indirect
violence, the end is always jagged and irregular; and it is obvious
that the effort to effect reduction, and the injury done to the areolar
tissue by the rough spicula after the bones are returned, must greatly
increase the chance of gangrene of that tissue ensuing: hence it
is almost always necessary to saw off some portion of the broken
fragments, either with the view of facilitating reduction, or of
rendering the extremities smooth and even, or of effecting both
purposes.

The quantity of bone to be removed depends on the extent of
the protrusion and the spiculation of the ends. We should have
them smooth and fairly coapted, no matter how much it may be
necessary to saw off; far better is it to allow the limb to be per-
manently two inches short than to expose the patient to the remotest
chance of gangrene of the areolar tissue. Nothing can be more
unsurgical, and more likely to lead to all the evils consequent on
compound fracture, than making violent traction to accomplish
reduction of the bones, when the removal of a small piece of the
bone, by means of a saw, would enable the fragments to fall into
easy and perfect apposition. The best sort of saw to employ is a
small one, on the principle of Mr. Butcher's, the serrated edge
being turned upwards, so as to saw the bones from below upwards;
thus the soft parts are defended without any of the stretching, and
the trouble consequent on the use of clumsy retractors. As the
lower fragment seldom protrudes, and is overlapped by the upper,
it is often difficult to get at it satisfactorily, so as to take off a
sufficient portion of bone; but in general, by means of the saw
alluded to, and a good cutting forceps, all spicula and roughnesses
can be removed.

The bones being rendered smooth, and properly coapted, the
limb must be left as tranquil as possible, and the disturbing action
of the muscles must be controlled by mechanical means and
by anodynes. There has always been much difference of opinion
as to the best mode of placing the limb; but this consideration
depends altogether on the exact situation of the fracture, and its
direction. If the fracture be in the lower third of the bones, and
be oblique from above and without downwards and inwards—
assuming that the ends have not been removed, or not to a sufficient

extent to render them transverse—the old plan of laying the limb on the outside, with the knee flexed, is the best, often the only, means whereby the bones can be kept in apposition. But should the line of the obliquity be from above and behind downwards and forwards, the limb must rest on the back; and for this purpose the swinging apparatus is most desirable. The latter is the position which, in all cases, must eventually be assumed; for, should the limb be left long on the outside, with the knee flexed, not only is there much pain to the patient, and trouble and difficulty to the surgeon in straightening the joint, but the suppuration which so frequently occurs in the sheath of the muscles on the outside of the leg is apt to escape notice until a large abscess has burst either above the outer malleolus or below the head of the fibula. The position of the limb opposes the escape of the pus from the wound, it therefore gravitates to the bottom, leading to a lodgment there, thus favouring the formation of the large abscess alluded to. A fortnight is long enough to leave the limb in the flexed position; at the end of that time muscular action and the mobility of the bones will be lessened so as to admit of the fragments lying in tolerably good apposition when the limb is placed on the back.

Seeing that both forms of gangrene are purely constitutional, it follows that, as a matter of primary importance, strict regard should be paid to every circumstance contributing to the general health. If the patient's residence be in vitiated air, he should be removed therefrom, as soon as possible, after the accident; and, under any circumstances, his room should be well ventilated, free admission of pure air being secured   Of all influences exercising a depressing effect on the system, and thereby predisposing to gangrene and low forms of inflammation, none is more powerful than impure air. Many persons will apparently enjoy good health in abodes where the air is not only stagnant but impregnated with foul gases; but when such become the subjects of injury, especially of wounds and cuts, then the evil is to be witnessed either in the supervention of erysipelas or of gangrene, or in the utter failure of reparative action. How often do we find the one result averted and the other corrected by changing the individual into pure air.

Next in necessity to free circulation of pure air in lessening the predisposition to gangrene is the supporting the patient's strength, from the starting point, by nutriment, wine, and tonics. In injuries of all kinds the practitioner is apt to withhold these measures until actual debility demands them; but in every instance where

gangrene or low forms of inflammation are to be apprehended we must, from the commencement, deal liberally with the case, especially as regards wine. Of medicines, the sulphate of quinine is unquestionably the best.

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ART. XIV.—*Commentaries on Diseases of the Heart and Vessels.* By ROBERT D. LYONS.

THE following observations will, I trust, be received with indulgent consideration. Their object is to discuss, not in set manner or in systematic order, some points which appear to me of practical interest and importance in the pathology, diagnosis, and treatment of certain forms of disease of the heart and great vessels.

*Irregular and Intermittent Heart and Pulse, without Discoverable Organic Disease.*—The phenomenon here indicated I have had occasion to observe in youth, in adult, and in old age, in connexion with acute as well as with chronic disease, and also in conditions of the system in which no other lesion was present.

I have observed the following amongst other instances of irregular cardiac and vascular action :—

1. A state pretty common in persons of 60 years of age, and upwards, in which there is momentary arrest of the cardiac and radial beat once, perhaps, in a minute, and this at certain intervals in the day, and not observable at all times. During confinement to bed, from trivial and temporary ailments, especially those affecting the chest, this phenomenon becomes more constant. It often then recurs twice or three times in the minute, and is followed by a peculiar hurried action of the ventricles for three, four, or half a dozen beats. The momentary cessation of the cardiac action is in some patients sensible to themselves, is attended by a thrill of apprehension through the whole system, and is often the cause of much anxiety and distress of mind. I have, in some well marked cases of this affection, observed the presence of very fully developed *arcus senilis* around the cornea. So far I think this supports the assumption that the irregular cardiac action in question is due to a weakened, flabby, and probably fatty condition of the ventricles. It may be further noticed, that in cases of this kind the heart's action is very much influenced by the respiratory movements Thus

a sudden cough, or an unusually deep inspiration, or any sudden check to either the inspiratory or expiratory effort will be sufficient to cause an immediate, but momentary, arrest of the heart's beat and the radial pulse.

The practical therapeutic indications which I think derivable from the consideration of these phenomena are to avoid lowering and depleting measures when such patients are affected with subacute bronchial, or other pulmonic lesions; and, on the other hand to fortify the system, and the heart especially, by nourishing broths and a liberal but judicious use of stimulants.

2. A state in which, in persons of adult age—30 to 40—irregular action of the heart, with momentary cessation of its beat, occurs in the condition of physical and nervous prostration which supervenes. to that of inordinate excitement maintained for ten days or a fortnight at a time by excessive indulgence in alcoholic drinks. One of the most marked instances of this kind which I have met with was recently under my observation. There was great sense of depression, collapse, and weakness referred to the cardiac region, the patient putting his hand upon the heart, and saying, " It is all there." The cardiac impulse was found to be feeble, the rate of circulation from 65 to 70, and the first sound weak. A cardiac pause occurred at about 15 to 20 beats for two or three days; it then became more irregular, and occurred once or twice in every two or three minutes; subsequently it occurred only during part of the day, towards evening, when the patient's system ran down; gradually this symptom disappeared. The same patient, on several previous occasions, after excessive abuse of alcoholic drinks, complained of great cardiac sinking and depression; but the heart and pulse never before exhibited the phenomenon of momentary interruption of its beat.

I have, in several instances, noticed the connexion of dipsomaniac indulgence with great languor and debility during portions of the day —usually the afternoon—coupled with cardiac depression and feelings of a hypochondriacal character, and with melancholy forebodings. The circulation is, under these circumstances, found to be languid, the heart's action feeble, the sounds dull, and wanting " tone" and "ring;" and the pulse at the wrists is readily compressible, and wanting in resiliency.

I feel persuaded that this train of symptoms is connected with incipient fatty degeneration of the muscular structure of the heart. Bracing air, tonics, the preparations of iron, animal food at frequent

intervals, and moderate stimulation, especially by such wines as those of the Burgundy vintages, which fortify and invigorate without producing excitement of the circulation—are the remedies which I have found most beneficial. By such means I have no doubt that cardiac degeneration can be arrested.

3. Another, and more singular, form of cardiac irregularity is that which I have found to occur in persons of advanced age. The pulse is slow—at or under 40 in the minute; it is a long, slow, and labouring pulse-wave, which lingers under the finger, but is altogether devoid of resistance or force, and can be completely extinguished by slight pressure. The cardiac impulse is extremely feeble; but it is on applying the stethoscope that the most marked phenomena are discovered. The rhythm of the cardiac sounds is altered; and, instead of a double sound, we may find a treble or quadruple sound. One very well pronounced example of this affection came recently under my notice. The patient was aged over 70 years, a female. The pulse at the wrist was hardly 40, and this seemed its permanent rate. The cardiac impulse was very feeble; and, on applying the stethoscope, a distinctly triple rhythm of the heart's sounds was audible. This, be it observed, was not a temporary or momentary condition, but one which we found, after repeated examination, to be, so to speak, the normal state of the heart's action in the patient.

I conclude this case to be another example of weakened and probably fatty heart. The occurrence of treble, and even quadruple, sounds attending the heart's beat I think admits of ready explanation by a want of synchronism in the action of the several *pairs* of the parts of the heart which, we know, usually perform their motions together. Thus, if the ventricles do not contract at precisely the same moment we have doubling of the first sound; if the great vessels, aorta and pulmonary artery, do not react on their contents at precisely the same instant, reduplication of the second sound will be the result.

We know that, under the influence of nervous excitement, in young females, in certain chlorotic states, and even in males at or about the age of puberty, and under other conditions not well defined, a triple rhythm of the heart's action is occasionally induced. It is in these instances, however, but a transient and temporary phenomenon, and disappears under treatment.

*Feeble Heart, with Hypochondriacal Symptoms.*—Another class of cases may be now noticed. They occur, so far as my observations

extend, chiefly in individuals of rather full and plethoric habit, and who are supposed to be in robust health. They are usually persons in the prime of adult life, 30 to 45 years of age, rather over than under the middle height, well coloured, of energetic minds, and at one period of their lives, if not actually so when under observation, of vigorous frame, and capable of undergoing much physical exertion. The appetite is usually good, and the various functions of the body are performed with regularity. What, it may be asked, are or *can be* the ailments of persons apparently in such rude health?

When individuals, in the circumstances now under consideration, make known their complaints it is not unusual to find them treated by their friends as " fanciful," " hippish," or "indolent;" and so much do appearances belie their statements that they are not always accorded sympathy, still more rarely entire credence. And yet their ailments, and I may even say their sufferings, are as real, and occasionally as severe as those which occur in disease of a less questionable character.

In these cases it will often be found that the patient complains much of general debility, with total prostration of nervous energy, and sensations of great weakness, sinking, and even collapse—the latter chiefly referred to the cardiac region. There is much hypochondriac feeling, with morbid forebodings, and an irresistible melancholy seizes upon the mind, which it is found impossible to shake off by any effort of the will. In some patients these symptoms prevail during a great part of the day, and constitute an aggregation of misery and distress that eventually becomes almost intolerable. In other instances it is only in the latter half of the day that the patient's system runs down, as it were; or, as it was on one occasion very strikingly illustrated to me, the patient feels as if the system were like a piece of clock-work, wound up and set to go for a certain number of hours, during which nervous and mental energy were well sustained, and physical exertion, even of considerable amount, could be well borne. A moment seemed to arrive, however—in this instance about one o'clock in the day—" when the weights had run down," the clock-work ceased to go with its previous energy, and the patient, feeling the nervous system all unstrung, and the muscular apparatus feeble and relaxed, was no longer capable of voluntary exertion of the will or mind to the full extent of their powers. Feelings of melancholy, depression of spirits, sighing respiration, disposition to lie down, and, in some instances, a heavy sleepy state supervene. In some cases recourse is secretly had to the use of stimulants, from

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the knowledge which the patients have, by experience, acquired of their efficiency in, at all events temporarily, relieving the state of wretchedness and depression into which they are accustomed to sink at a particular hour of the day.

The heart's action and pulse are usually, in these cases, very feeble, the radial pulse being " shabby " and " thready." There is manifestly an incomplete and inefficient circulation of blood, due, I think, primarily to a weakened and atonic state of the ventricles, and possibly, at a subsequent period, to incipient fatty degeneration.

Change of air, horse and foot exercise in a bracing climate, a tonic regimen, frequent use of broiled meats, an early and light dinner, avoidance of succulent vegetables, the moderate use of brandy rather than whiskey, properly diluted, and the more tonic and invigorating wines of the Burgundy rather than the claret vintages, I have found to be attended with most excellent results. In many of these cases there is a mechanical as well as a physical connexion and dependence manifested between the stomach and heart. The state of collapse above described is generally found to occur about the time that the stomach is empty and idle. A small quantity of broiled meat, with a glass of Macon, Beaune, Volnay, or other tonic Burgundy wine at this period of the day will be found an excellent stimulant to the heart as well as to the whole system. The bitter vegetable infusions, with or without the preparations of iron, are also indicated; while in many cases the ammoniated tincture or the infusion of valerian, given in effervescence three or four times a day, will be found highly beneficial.

These cases, if neglected, have unquestionably a tendency to run on into confirmed fatty degeneration of the heart—a full development of which state may be anticipated between the 50th and 60th years, if not earlier.

*Aortic Murmurs.*—In young and otherwise healthy persons, males, at or about the age of puberty, I have in several instances observed murmurs referrible to the ascending portion of the aorta, and in point of time following, with a slight but appreciable interval, on the ventricular systole. The individuals in question appeared in the enjoyment of fair average health, being well nourished, well coloured, and in no respect anemic or chlorotic, and of vigorous, if not robust frame. In some instances the murmur was detected in consequence of an examination of the heart being asked for by reason of slight palpitation and distress in the precordial region.

In other instances I have become aware of the presence of this variety of murmur, under circumstances which called for a general exploration of the chest, but in which no suspicion was entertained by the patient himself that anything abnormal existed in the action of the heart or vessels. The murmur has been usually of a some-what rough blowing character. I have found it limited by the aortic valves, and in no instance diffused in the direction of the ventricles. I have more than once known it to be scarcely audible till the stethoscope was passed an inch or more above the level of the sigmoid valves. Its point of maximum intensity was about the junction of the middle and upper third of the sternum; and, though audible at the top of this bone, it was but faintly propagated into the carotids. The ascending portion of the arch of the aorta and its contained blood must be interrogated for the cause of this murmur. The integrity of the valves of the aorta seems to me to be guaranteed in these cases by the faintness, and, in some instances, absence of the abnormal sound at the "cardiac centre," and the purity and clearness of the second sound in this situation in all the cases that I have observed. Spanemic and chlorotic states of the blood I have judged not to exist, from the well-nourished condition of the body, and the florid colour of the face and surface generally.

In persons of more advanced age atheromatous states of the aortic walls, with or without calcareous degeneration of the inner coat, and the production of the so-called "osseous" plates will readily account for murmur localised in the aorta, and unattended by abnormal valvular sound. It is well known to pathologists that even in very advanced states of degeneration of the walls of the aorta, extending to within a very short distance of the origin of the vessel, the semilunar valves will often be found in a condition of perfect integrity, retaining their transparency, and being in every respect adequate to perform the office of closing the mouth of the aorta, and preventing the return of the blood into the ventricle.

But though atheromatous change is possible, it is certainly of great rarity prior to, at, or shortly subsequent to puberty. I think we may even assert, in general terms, that *atheromatous disease is of exceptional occurrence prior to the thirtieth year of life.* (I have, however, myself seen well marked exceptions to this rule.)

It becomes a question of great nicety, as well as of much practical importance in reference to prognosis, to determine the nature and source of murmur in the class of cases in question. If of organic origin, and dependent on atheromatous degeneration of the aortic

walls, we can at best but anticipate slow aneurismal dilatation of the primary arterial trunk, with the probable formation of a fusiform "true" aneurismal tumour in the chest by the time the patient reaches his fortieth or forty-fifth year. In the interval he runs the risk of rupture of the more inelastic *atheromatised* inner, and middle coats of the aorta, as the result of any unusual strain the vessel may be subjected to by blows upon the chest, violent muscular exertion, forced respiratory efforts, or other agencies of similar effect. Rupture of the coats of the vessel will, of course, be speedily followed by the formation of "dissecting" or "false" aneurism, a diseased state which, under the most favourable aspect, is incompatible with a protracted duration of life—far less so, as will be subsequently shown, than in cases of "true" aneurism.

To put the problem in question in a definite and concrete shape before us we shall pose it thus:—

*Given*—A youth, from 17 to 25 years of age, well formed, of medium stature, build, and weight, well nourished frame, and well coloured complexion, with every evidence of well arterialised blood, and all the functions discharged in a healthy manner, the circulation being tranquil, or but slightly disturbed. It is desired for any of the reasons, half social half commercial, so numerous in the present day—to insure his life for a liberal sum. The most careful general exploration gives no evidence of disease, with the exception of a rough, blowing murmur audible in the aorta, not heard at the cardiac centre, but more or less audible in the carotids. Whether is the examining physician to recommend for insurance or to reject such a life?

It is unnecessary to dwell on the important issues at stake, and the responsibility that attaches to the verdict of the medical practitioner under these circumstances. And be it remembered that they are circumstances in which compromise of opinion is impossible. He has but one alternative—to reject or to recommend the life. Now I believe that, guided by precedent, and by what may be deduced from systematic works, the life in question would be rejected in the majority of instances. And yet I am persuaded the decision would be an incorrect one.

Besides others that have come before me at various periods, I have more recently had the opportunity of observing not less than five cases of this affection. The murmur is well marked in all; in all the limits of its diffusion are those above assigned; and in all the frame is well nourished, and the blood well oxygenated; in two

there is, or rather was, for a time, slight palpitation and some slight cardiac uneasiness; but in none of them is there the slightest abnormal sound, or action in the heart itself. In some instances I have known the murmur to disappear altogether in the progress of the case.

In the five examples now cited the murmur remains, and therefore they may be considered still *sub judice.* I have myself, however, acquired the strongest conviction that in no single instance out of the five is the murmur dependent on atheromatous or other organic change in the walls of the aorta. This conviction I base on the following considerations:—

(*a*). The youth of the patients.

(*b*). The absence of pain, distress, or uneasiness, referrible to the aorta in the majority of cases.

(*c*). The tranquil state of the circulation.

(*d*). That I have known the murmur to disappear in similar instances previously observed, the action and sounds of the heart and aorta being perfectly normal.

*Obstructive Disease of the Aortic Orifice.*—In this important form of lesion of the heart the usual phenomena are those of impeded circulation, systolic murmur propagated into the aorta, cardiac distress and palpitation, and finally death, from the effects of imperfect circulation, venous congestion, secondary engorgement or the lungs, liver, and kidneys, and dropsy in the extremities or the great cavities. It cannot however, I think, have escaped the notice of observant physicians that cases agreeing in the acoustic phenomena, and therefore, and justly so, classed alike as instances of aortic obstruction, differ very widely in duration, in the amount of suffering entailed, and in the general state of the patient's health and fitness or capacity for the ordinary avocations of life. In some of these cases a fatal issue ensues after no long interval, and with much suffering; in others, as in the following instances, a comparative state of health and physical comfort is long maintained.

One of our dispensary cases at Jervis-street Hospital exemplifies in so striking a manner the principles involved in our first and second propositions, that I think it will be useful to consider its features somewhat in detail. Several of our pupils recently examined the case of Mrs. M., amongst our out patients, at that institution. She is a *healthy-looking*, fresh-coloured woman, of middle stature, comfortably clad, the wife of an artisan, in moder-

ately easy circumstances for his position in life. It is worthy of remark, that this woman sought advice for a trifling derangement of the stomach, with foul tongue, and of recent origin. She made no complaint or reference whatever to her heart till she perceived, after she had explained her gastric symptoms, that I did not identify her. I had, however, recognised her face as one perfectly familiar to me. She then mentioned her name, and the fact of her having been under my care for "Heart Disease" two years and a half previously. This brought her case, with its history, symptoms, and pathology to my mind in all its vividness. Fresh inquiry elicited a repetition of her history, to the effect that some seven years since she had an attack of rheumatic fever, subsequent to which she complained of heart affection. At the period of my last seeing her, two and a half years since, she went to the country for change of air, by my advice, and she has since not only enjoyed very fair health, but has borne another child, now just weaned. She is perfectly aware that she has "the Disease of the heart," as they generally term all cardiac affections. She suffers but very slightly, and that only occasionally.

Now let us see what are the stethoscopic signs in this case. I examined her with much care and interest, and many of the pupils can confirm the observations then made. The pulse at the wrist was regular, and in no way remarkable for excess or deficiency of force or volume. The cardiac impulse is full and sensible over an increased surface of moderate extent; the precordial dulness is likewise increased in extent to a moderate degree. On applying the stethoscope a very loud whirring murmur is audible with the first sound of the heart, or rather replacing or drowning it. This murmur is very intense, much louder than in any of the other cases at present under observation. It is audible from the apex to the base of the heart; it is propagated up the line of the aorta, and is heard at the root of the neck and in the carotid arteries with great intensity; it can be traced as a very loud sound, and still of a whirring character, in the descending thoracic aorta; it is audible between the scapulæ and over the last dorsal vertebræ; it is heard, almost with the same intensity, in the lumbar region; and it is perfectly audible and distinct when the stethoscope is carried to the lower end of the sacrum. And it is to be borne in mind, that in this case our examination was made through the numerous and thick folds of a female's dress. I have no doubt that the murmur is audible in this patient in the iliac and the femoral arteries, and

perhaps through the whole arterial tree. Now, note again the remarkable features of this interesting and instructive case. The patient makes no complaint of heart symptoms; she has for two years and a half enjoyed average health, with freedom from cardiac distress, except at rare intervals, and she then suffered but little. There is little, if any, disturbance of the equilibrium of the circulation. Not only have the functions generally been performed with every indication of integrity on the part of the great organs, but she has safely gone through that most wonderful of God's operations performed in the human economy, viz., that of child-bearing, and the subsequent process of suckling her child.

Taking it all in all, there will rarely be met with a case more full of interest and instruction.

From the fullest consideration which I have been able to give this case I regard it as an instance of obstructive disease at the mouth of the aorta, the result of vegetative growth in the semilunar valves, which offers a certain amount of impediment to the egress of the blood from the ventricle into the aorta, by which it is thrown into vibrations, and so the murmur is produced synchronously with the first sound of the heart. But observe, the second sound of the heart is, in this case, perfectly pure, clear, and distinct. From this we infer that the lesion of the valves is such that while it impedes the outflow of the blood from the ventricles, it in no way interferes with the integrity of the aortic valves, and they are, therefore, as fully able as in the state of health to close the aortic orifice, and so prevent regurgitation from the aorta into the ventricle.

But we have, I think, in this case something special in the cardiac mechanism, under its new conditions of disease.

I may compare for a moment the case of Mrs. M. with that of poor G., another patient in hospital, with similar stethoscopic signs of disease. In the latter instance we have great cardiac suffering, the equilibrium of the circulation is profoundly impaired, the lungs and liver suffer in consequence, there is much œdema, general debility, and incapacity for exercise, not to say manual labour or active avocation of any kind. And yet the case of G. presents essentially the same stethoscopic phenomena. There is but a single murmur; it is systolic or audible with the first cardiac sound; it is propagated up the aorta. It is not, to be sure, of anything like the same intensity as that in Mrs. M.; it is not propagated one-tenth of the distance; it has not the same whirring character. But all this, if we confined our attention to local and stethoscopic signs, would

only mislead us, for we should be led to imagine that Mrs. M's.
was far the worse case of the two. Whereas, in practical reality,
Mrs. M's. state of health is one of comparative ease; poor G's. is
one of much suffering, and our prognosis must be of the most
unfavourable kind, and implies a speedy issue in death. They are
both cases of *non-regurgitant* obstructive disease of the aortic valves.
Wherein do they so essentially differ? Are we to assume that it
is a mere freak of disease; that in one there is tolerable health over
a period of at least two years and a half, and this compatible with
child-bearing and nursing; while in the other the debility is extreme
and the suffering great? It is not a freak of nature or disease;
this is, I believe, a term of a by-gone day, and implies insufficiently
or unsuccessfully explored causes.

From a review of the numerous morbid specimens which are in
my possession I think I can satisfy myself that there exist two very
distinct forms of non-regurgitant obstructive disease at the mouth
of the aorta. (The various proofs from examination and com-
parison of specimens cannot be given in print in the absence of
illustrations.) In one of these forms it may be observed that the
aorta is constricted at its mouth, and the vegetations are so placed
as to present a very serious obstacle and impediment to the egress
of the blood from the ventricle. I shall call this variety obstructive
aortic valve disease, with narrowing of the mouth of the aorta—for
brevity sake we shall term it "obstructive stenosis." It is well
exemplified in some of my specimens; it is what I believe exists in
the case of G. It is necessarily attended with great disturbance of
the equilibrium of the circulation, and a permanently incomplete
and ineffective circulation of blood. The lungs, the liver, and the
other organs so directly implicated when the balance of the circu-
lation is destroyed in the heart's chambers, become necessarily
diseased in this form of valvular lesion.

Now, contrasting other specimens, I find there exists obstructive
disease, it is true, in the aortic valves; but though the vegetative
masses are considerable, the mouth of the aorta is larger than
natural, and though the warty vegetations obstruct the blood as it
flows from the ventricle, still the vessel is so capacious that no
serious impediment to the egress of the blood takes place. The
impediment is sufficient to throw the blood into vibrations, which
cause systolic murmur, but the circulation is efficiently maintained,
for the great arterial tube readily admits of the free passage of the
blood through it. This latter condition I assume to exist in the

case of Mrs. M. I think we may, with propriety, designate it obstructive disease at the mouth of the aorta, with a patulous, or it may be a dilated state of the vessel. We may, for brevity sake, designate it " obstructive patency." There is one difference in the signs in these two cases, to which I have not yet called attention, and I presume it will hold for the two classes of cases. It is the condition of the radial pulse. In the one class of cases, that of stenosis, it is a small weak pulse, that of an imperfect circulation. In the other class of cases, like that of Mrs. M., the pulse is natural in force and volume; it is the pulse of a vessel receiving its full charge of blood at each stroke of the heart. In fine, in the one case we have a deficient and wholly inadequate circulation; in the other the circulation is well and fully sustained, and quite as much blood finds its way at each stroke of the ventricles into the aorta, and thence into the peripheral vessels as in health, *malgrè* the vibrations given to it at the mouth of the aorta, as it issues from the ventricles, by the vegetations aforesaid.

I have elsewhere taken an opportunity of showing how the considerations to be derived from a study of the states of patency and stenosis apply to mitral as well as aortic valve disease. In my mind they give us a new light to aid in the explanation of the apparent anomalies and paradoxes which we have been accustomed to associate with our ideas of cases, bearing the same technical designation, but differing as widely in practical result to the patient as the cases of Mrs. M. and poor G. are seen to do.

Another case, which bears out the foregoing observations, may be cited from my note-book. It is that of a gentleman, then aged 36, whom I saw in consultation about two years since. He was then labouring under an aggregation of aggravated and apparently hopeless maladies. At the period I speak of I found him suffering from delirium tremens, extreme anasarcous swellings of the lower extremities, dropsy of the abdomen, and an anasarcous state of the upper extremities and of the face. The urine was albuminous, but *not* of low specific gravity. But his chief complaints were referred to the precordial region and chest generally. The breathing was hurried and oppressed; much palpitation and cardiac distress being complained of; the pulse was rapid and feeble; and on applying the stethoscope over the heart a very loud, rough, and whirring systolic murmur was audible, which could be traced up the aorta and into the carotids with great intensity.

For more than a week this gentleman's life was despaired of.

His will was executed in anticipation of an immediately fatal issue. Extreme delirious excitement prevailed to such an extent that it was next to impossible to keep him in bed, all those immediately in attendance on him being overborne by the violence of his demeanour. The dropsical state was daily increasing; and it was evident that he was fast wearing out the slender thread of life that remained to him.

Much against the will of his friends, who from former experience supposed that almost unlimited supplies of stimulants were required to maintain his system under the state of delirium, I insisted (and not without much difficulty were my injunctions carried out) in having the supplies cut short. With the more rational frame of mind thus soon induced we were enabled to enforce the regular use of diuretic and purgative medicines, and other suitable remedies. A rapid improvement in his state was speedily effected; a copious drain by the kidneys and bowels was maintained for several days; and ultimately we had the gratification to find that the dropsical swellings completely subsided; the circulating system became tranquilised; *though the cardiac murmur was still persistent;* the respiration returned to its normal rhythm; strength was gradually restored; and the patient was enabled, after the lapse of a couple of months, to resume his ordinary avocations in the country. He even acquired a very considerable amount of vigour, which he had been a stranger to for a long time previous to his illness; and, amongst other things, it may be mentioned that, though married for some five or six years prior to the illness in question, it was only about a year subsequent to it that he became the father of a child. He still lives in the enjoyment, I am given to understand, of fair average health.

My interpretation of this case is very much the same as that given for the preceding one, viz., that it was, or rather is, an instance of " obstructive patency " at the mouth of the aorta. The dropsical state I am disposed to refer to a temporary overturning of the equilibrium of the circulation, with congestion of the lungs, liver, and kidneys, induced by the state of excitement consequent on continued and excessive indulgence in alcoholic stimulants.

We can readily conceive, it appears to me, how in the case of Mrs. M., and in that of this gentleman, the circulation can be fairly maintained under the exigencies of the new conditions of obstruction and patency at the aortic orifice as long as the blood is not driven at too high a speed, or under too high pressure. The patency of

the aortic orifice seems, under these circumstances, to compensate for the obstacles opposed to the egress of the blood by the warty vegetations on the valves. When, however, under alcoholic or other stimulants the circulation is driven at a high pressure, the equilibrium of the compensating agency and the obstruction becomes lost; each cardiac beat is attended with incomplete and inefficient discharge of blood from the ventricle into the aorta; each successive ventricular contraction and dilatation leaves a small surplus of blood undischarged from the ventricular chamber; this of necessity tells, in a retrograde manner, upon the left auricle and its blood-charge; this again, in its turn, upon the pulmonary veins; congestive stasis is thus produced in the lungs; through the terminal radicles of the pulmonary artery, through this vessel itself, and finally through the right ventricle and auricle, and so through the venæ cavæ to the liver and other great organs and parts the impediment is propagated. Finally, dropsy supervenes as a mechanical result of the congested state of the venous system in the great viscera and in the extremities.

*Pure Uncomplicated Myocarditis.*—The last case I shall cite in the present paper is one which I regard as of uncommon interest and importance. It furnishes an example of complete restoration of the heart to the most perfectly normal and regular action after years of prolonged suffering from cardiac disease.

The patient, a gentleman now aged 44, of light but vigorous frame, sanguine temperament, and active habits of mind and body, and who had formerly enjoyed uninterrupted health, in the early part of the year 1850 began to find himself in less satisfactory condition than usual. In July of that year—and then suffering much from debility and unpleasant sensation in the chest, with pain at the left side—he consulted a physician, who pronounced him to be labouring under " heart disease." The pulse was then ascertained to be 120 per minute. Leeches, and subsequently blisters, with 20 drops of tincture of digitalis, three times a day, were the remedies employed. Little or no improvement took place. And, speaking of his own case in a very able report, which he has placed in my hands, and which he has been good enough to review while in the press—the patient says:—" I grew worse daily; the action of the heart increased, with pain and soreness of the heart itself; until, at the end of two months, I became unable to go down stairs, and was obliged to sit on a sofa all day, and could not even move without increasing the heart's action." The treatment was continued for

four months "without further alteration;" but it appears the pulse
was reduced to 72 per minute in November, 1850. The patient's
report continues:—" I was then in a wretched, weak, nervous state;
could not rest in the same position for a moment; nervous twitch-
ings, and horribly unpleasant sensations all over the body." About
the middle of January following, 1851, the heart again got into
excessive action. " About the beginning of March I found myself
in a most wretched condition; heart's action so rapid and violent;
the beating of the heart at night rendered sleep impossible; and
being deprived of the power of reading (from unpleasant sensations
in the head, caused by the effort to read, long complained of then
and subsequently), and unable to devise any other suitable occu-
pation or amusement, I thought I should go mad." Two or three
months subsequently some slight amelioration appears to have taken
place in the general state; but the head was not improved; the
patient " could not read three minutes consecutively without heat
and pain in the head, and horrible sensations extending from the
head downwards to the heart, and all over the body."

Change of air and regimen subsequent to this produced some
considerable improvement in the general health and strength, so
that the patient could walk some miles in the day (with repeated
intervals of rest).

The history of this interesting case is protracted over the three
or four succeeding years, with many alternations of partial improve-
ment and retrocession. On the whole, however, a slow but gradual
amendment in the state of the general health, and in the condition
and action of the heart, took place between the years 1852 and
1855. Towards the middle of this latter year the patient found
himself well enough to resume his practice at the legal profession;
but he adds, " I cannot say that my health was *perfectly* restored
until 1857."

The various plans of treatment employed in this case comprised
digitalis, prussic acid, bitter infusions, ignatia, iron, zinc, and other
tonics. Vesication—or, as the patient himself terms it, " the
blister torture"—was continued every third day for ten months; and
during four months longer the patient " was weaning himself off
it"—that is, continuing its use, but at longer and longer intervals.

A tonic regimen, with cold shower baths, was persevered in for
nine months with, apparently, some improvement to the general
health, as during its use he was able to walk about two miles in the
course of a day. But that there was no substantial gain may be

judged from the fact which he states that " having one day over-fatigued myself, I was not able to stir out for a month, and did not recover the effects of it for the entire winter." Shortly subsequent to this he underwent a course of hydropathic treatment. which was prolonged for a year and a half. He appears to have improved a good deal in general health for a time, while under this treatment, which he himself ascribes to " the effect of the air and regimen as much, if not more, than the hydropathic treatment, which was administered very sparingly at first." It is worth while to note, that during this period his allowance of animal food was diminished one half—his hydropathic physicians recommending little meat and much vegetables. Hydropathy was abandoned in its turn; and finally the patient placed himself under mesmeric treatment.

In proceeding to comment on this singular case I may premise, that I had several opportunities of examining this patient at periods when the heart was in a state of the highest excitement. Under these circumstances the debility was extreme, the patient's sufferings most intense, and the cardiac action almost more violent and tumultuous than I have ever witnessed it in any other case. The face was flushed, and the malar bones especially much congested, but of a vivid, not a cyanotic hue. The pulse was rapid, 120 to 130, but not irregular; and it was not remarkable for force or volume. The impulse of the heart to the hand, placed over the precordial region, was very violent and tumultuous; percussion gave no positive indications of much increased size of the organ; but when the stethoscope was applied, a loud, diffuse, systolic bellows-murmur was audible, with great and equable intensity over the whole precordial region. No doubt remained on my mind, on any of the occasions on which I examined him, that this gentleman laboured under incurable organic valvular lesion, and that it was but a question of time as to when the fatal issue might be expected. I believe I am justified in saying that this opinion was fully shared in by all those who examined the patient, and amongst them were some of the ablest stethoscopic observers whom I am acquainted with.

The subsequent history of the case is soon told. This gentleman resumed the practice of his profession in the month of June of the year 1855, as above stated. In the year 1857 he considered himself *perfectly* restored to health. In the following year it became desirable to effect an insurance upon his life, and from the entirely satisfactory report of the examining physician as to the total absence of all morbid signs or symptoms referrible to the heart, or indeed

any other portion of the system, he was accepted as a first-class life. On two subsequent occasions, it became my duty to examine his life for insurance, and after the most minute, prolonged, and careful stethoscopic examination of the heart, and a full exploration of the general state of the system, I could come to no other decision than to recommend him, as a first-class life, to be insured without extra risk premium. As in the former instance, his life was accepted in both the Companies for which I was concerned. It is needless to add, that a full history of his previous illness was, in every case, submitted with the proposal for insurance, and the medical examiner's report. I may, in conclusion, state that while this paper is in the press I have made a renewed and most careful exploration of the heart in this gentleman. Its impulse and sounds are *perfectly* normal and regular, and the pulse is equable, of moderate force and volume, and steady at 72 per minute. In reflecting on this very singular, if not unique case, the following considerations arise:—

1. It might be assumed that the patient laboured under a functional affection of the heart.

2. The disease might be assumed to be of the nature of those cases of chlorosis and anemia which we know may and do occur in the male, but which are so much more common in the female.

3. It might be assumed that this gentleman laboured under an obscure form of disease of the nervous system, with secondary and symptomatic disturbance of the circulating system.

4. It might be supposed that the case was one of organic lesion, affecting the mitral valves.

5. It might be assumed that the case was one of obstructive disease at the mouth of the aorta.

*Cor.*—As a corollary to the 4th and 5th propositions, it might be now assumed that the case was, or rather is, an example of organic disease of either the mitral or aortic orifice, with suppression of the murmur, usually attendant on those affections, in the manner pointed out by myself and others.

6. It might be assumed that the case was one of pure, uncomplicated, but very chronic myocarditis.

That the last theory is the only tenable one, and that which will alone explain all the phenomena of this very singular and instructive case, I shall presently endeavour to show. We shall, in the first instance, make a few observations for the purpose of refuting the other theories which may, as we have seen, be advanced to account for the principal features of this gentleman's case.

Very singular and anomalous cases of functional disturbance of the heart, must be familiar to all practitioners much versed in cardiac pathology. I am not, however, aware of any instance, nor indeed can I even conceive the possibility of any such case, in which functional disturbance of the heart was continued over such a protracted period as in the example now before us. Besides, it is beyond all question that the cardiac distress, pain, and tumultuous action of the organ, with the quickened pulse, flushed face, and vividly congested malar bones and general debility, observable in this case, were positive and not subjective phenomena. The violent ventricular impulse, and the loud whirring murmur audible by the stethoscope, would have satisfied any observer that the case was one of organic lesion of some kind, and that no functional derangement could produce phenomena of so unaccountable a character. Against the hypothesis of chlorosis and anemia, the patient's previous history, temperament (sanguine), habit of body, and *colour* of surface generally, as well as of the face, constitute, in my mind, conclusive evidence. Further, to judge upon the good old rule, from the arguments furnished by the *jüvantia* and *lædentia*, iron and tonics failed to give the smallest relief, and so far make directly against the supposition of any chlorotic state, which, indeed, there was, in my mind, no ground for thinking to exist.

In reference to the fourth and fifth propositions, it may be affirmed that, in the whole range of cardiac pathology, we are not acquainted with any facts that would warrant the conclusion that the valvular apparatus of the heart, once impaired by organic lesion, can ever be restored to perfect integrity. Indeed, the most superficial consideration of the anatomical disposition and the delicate texture of the semilunar or mitral valves, must satisfy us, from *a priori* reasoning, that even slight injury of these extremely fine membranous expansions does not admit of repair by any efforts of nature. While pathological anatomy demonstrates that the various morbid conditions of the heart's valves—such as fissure, cribriform perforation, ulceration, warty vegetation, calcareous deposit, or other change of what kind soever—tend, in proportion to the duration of the case, to become more and more aggravated morbid states. That, under certain circumstances, in which the equilibrium of the circulation is but little disturbed, life may be prolonged, in cases of valvular lesion of the heart, for almost an indefinite period, we have already proved. But we have no evidence whatever to show that organic change in

the valves of the heart admits of radical cure, with a return to perfectly healthy action of the organ, and total cessation of all morbid phenomena.

It will be desirable to advert here to certain remarkable instances of temporary suppression of cardiac murmurs developed in connexion with organic lesion of the valves, and which, as before stated, it might be supposed would furnish adequate explanation of the phenomena of the case now before us.

The temporary suppression, or even final cessation of murmur, developed in the mitral orifice, is familiar to physicians fully versed in the pathology of the heart.

Such suppression of cardiac murmurs has been noticed in the brief interval before death, when the heart's contractions lose their accustomed vigour, and the blood is not propelled with sufficient force over the valvular irregularities to produce murmur.

Suppression of mitral murmur has likewise been noticed in certain cases at a period long antecedent to death. It seems to be due to an artificial re-establishment of the equilibrium of the circulation, and a cessation of ventriculo-auricular regurgitation, by an adaptation of the diseased, but now much thickened and enlarged valves, to the mitral orifice. These valves, which when first attacked by disease were rendered incapable of closing the orifices which they were destined to protect, become, by thickening of the valvular texture, or by peculiar adaptation of the vegetative masses, again competent to close the orifice, which in many instances has itself likewise become *adaptively* diminished in size. I had myself an opportunity, some years since, of calling the attention of the Pathological Society of Dublin to a similar adaptive process, which I found to be effected, in the case of the aortic valves, with concomitant suppression of the murmur previously heard with great intensity.

Both in respect to the aortic and the mitral valves it is to be observed, however, that suppression of murmur is not attended with alteration in the general phenomena of the case. The disturbance of the equilibrium of the circulation, and the consequent embarrassment of the organs in physiological connexion with the heart remain as before. There is no restoration to health, and the morbid condition is sure to end fatally sooner or later.

In reference to the sixth proposition, it may be observed, in the first place, that myocarditis, though comparatively unknown to the clinical physician as yet, is a morbid state well recognised in the records of pathological anatomy.

The cases cited by Testa, amongst other authorities, prove the occurrence of inflammation of the parietes of the heart independently of valvular lesion; and abscess in the walls of the heart, though not hitherto recognised during life, is a well-known pathological occurrence. We also know that several other lesions of the muscular texture of the heart present themselves in cases in which no lesion of the pericardium, endocardium, or valves is discoverable. We may cite, as examples, the softening of the heart in typhus fever, and fatty degeneration of the heart. I have myself witnessed cancerous deposit in the ventricular walls without any attendant morbid state of the lining membrane, or the serous covering of the organ.

Inflammation of the muscular texture of the heart, irrespective of valvular or pericardial lesion, is thus, it may be concluded, a very possible, I would even go the length of saying a very probable, occurrence. Indeed, I am disposed to regard it as a morbid condition of greater frequency than is commonly supposed.

It may be acute or chronic; it may be attended with the formation of abscess or purulent infiltration in a more diffuse form; and, again, we can readily conceive the occurrence of chronic inflammation of the walls of the heart, without the formation of pus. Having, as I think, conclusively shown that no other of the morbid states assumed is capable of explaining the phenomena of the case of this gentleman, we are, I think, driven, *par voie d'exclusion*, to adopt the theory of a pure uncomplicated myocarditis, to account for the otherwise unexplained, and, indeed, unexplainable history of the case before us.

The general state of perfect health now enjoyed, after the lapse of so many years, with the complete state of integrity of the circulating apparatus, as tested by so many and so searching explorations, at long intervals, by different observers, for the purposes of life insurances, are conclusive proofs that no lesion impairing the valves existed at any period.

The cardiac distress, pain, palpitation and murmur, diffuse and not specially limited to any valvular area, and the occasional œdema are readily explicable on the assumption of a chronic myocarditis; while the complete restoration of the heart to healthy action, after years of suffering, is explicable on no other theory of cardiac pathology with which we are yet acquainted.

Art. XV.—*Reports of Rare Cases*. By Samuel Gordon, M.B.,
F.R.C.S.I., Physician to the Richmond, Whitworth, and Hard-
wicke Hospitals.

IV. *Case of extensive fatty degeneration in a boy 14 years of age.
Death from obstructed arterial circulation.*—A pale, unhealthy
looking boy, 14 years of age, an inmate of a public school, came
under my observation on the 17th of October, complaining
of severe headache, sore throat, and loss of appetite. The throat
affection rapidly got well; he was confined to bed for only two
days, but not making a good recovery, he was retained in the
Infirmary. His symptoms seemed to be those of acute cardialgic
dyspepsia. He was pale and weak, and complained of weakness,
principally after his meals, when he also suffered from pain in
the stomach, and vertigo. He had constant headache, his tongue
was tumid, indented, broad and white, with enlarged papillæ,
and his breath offensive; the bowels acted irregularly, and the
urine was pale and abundant. His appetite was very capri-
cious; he was generally thirsty; he slept badly at night, but
was usually very drowsy through the day. His pulse was but
slightly quickened; his feet and hands were generally cold; and his
skin was usually covered with a greasy perspiration. He had no
cough, and repeated careful stethoscopic examinations failed to
detect any physical sign of disease in his chest. Such were the
prominent symptoms under which he laboured, and from which he
appeared to be recovering but slowly, when, on the evening of the
5th of November, he was suddenly seized with acute pain in the
calf of the right leg. This pain was excessive, and kept him awake
all night. I found him the next morning still suffering from it, he
could not bear the least pressure, nor, without great increase of
suffering, allow any examination of the limb, which he kept in the
extended position, from which he could not alter it; but, provided
that the calf of the leg was not touched, he could allow it to be
moved. The foot was cold and remarkably pallid, and from the
knee down was almost entirely devoid of sensation; he did not feel
severe pinching, and even pricking with a pin he felt but very
faintly. Thus, coincident with this severe pain in the leg, there
was paralysis of motion and of sensation, with remarkable diminution
of temperature. Careful examination failed to detect pulsation in
either anterior or posterior tibial arteries of the right leg, or in the

popliteal or even in the femoral, while in the opposite limb all these arteries pulsated distinctly.

Nov. 7th.—The temperature of the right foot had fallen to 60° at the toes, although the foot had been kept wrapped in warm flannel, and frequently rubbed with a stimulating liniment. It had assumed a cadaveric pallor and rigidity, but there was not the least œdema nor venous turgescence nor capillary fulness; the anesthesia continued. The femoral artery could be felt like a quill, rolling under the finger; and examination with the stethoscope (as originally practised by Drs. Graves and Stokes, in a somewhat similar case), proved that there was no pulsation in the right external or common iliac or femoral arteries on the right side, while it was increased in strength and rapidity in all these arteries of the left side.

The case progressed slowly; on the 9th, the foot appeared to be regaining its natural heat; the temperature had again risen to about 70°, and with the return of heat there was also a most marked increase of power of motion and also of sensation. The patient could now draw the affected limb up to him in the bed, and seemed to prefer keeping the knee in a semiflexed position. He showed more feeling in the foot and leg when they were handled, but the pain was still very severe in the calf of the leg, and he shrieked with pain when this part was touched. There were, on this day, the following local signs of improvement:—1. Complete freedom from pain, as long as he lay undisturbed. 2. Increase of temperature of the foot. 3. Return of sensation; and 4, of power of motion to the affected limb. But, on the other hand, the constitutional symptoms all indicated extension of disease, the pulse had risen to 120°, the respiration was hurried and unequal, and his appetite began to fail; moreover, the second, third, and fourth toes began to be discoloured.

Nov. 10th.—There were added to the above symptoms, an almost incessant short, teazing cough, without any expectoration. Again the chest was carefully explored; the heart's sounds were very feeble but distinct; the respiratory murmur was somewhat rough and interrupted, but otherwise not abnormal.

The line of treament hitherto pursued, since the accession of the acute attack, was the local application of anodyne and stimulating embrocations and liniments, and the internal administration of bark and bicarbonate of potash, with a full dose of calomel and opium at night, and wine and beef tea at stated intervals.

Nov. 14.—Dr. Hutton visited him with me; he agreed in considering the nature of the case to be an arterial affection, and suggested the local use of mercury, and chlorate of potash internally, which suggestions were carried out. He also surmised that, although the case was clearly not a phlebitis, still it would most probably be found to be connected with visceral disease, most probably pulmonic; and we again made accurate search for physical signs of pneumonia, or its allied diseases, but without effect.

Nov. 15.—Although the temperature of the foot has risen considerably above what it was on the 7th, still it is considerably below that of the opposite limb. The gangrenous action does not seem to be extending; it has reached a variable height in each toe, but no where transgresses the line of junction with the foot; it is unaccompanied by vesication or œdema; he has no pain in any part of the limb, except when pressure is made on the calf of the leg. He complains to-day of a stitch in the left side, near the heart. A slight crepitation is heard in the lung at this part. A few leeches relieved him.

Nov. 17.—He coughs frequently, still without expectoration; his face is puffed, and slightly œdematous; his lips blue; sonorous and sibilous *rales*, of variable intensity, are heard over all the chest. Pulsation cannot yet be felt in any of the arteries of the right lower extremity; still there is no œdema nor venous turgescence; the temperature is still below that of the opposite limb; the power of sensation and of motion in the extremity is almost natural. He lingered until the 25th, when he died asphyxiated. The bronchitic affection appeared to make rapid progress, resisting all treatment, and the local affection remained most remarkably quiescent. It was, on one or two occasions, imagined that pulsation could be felt in the tibial arteries; but, at all events, it was not permanently restored; and to no other part of the arterial tree, from the common iliac down, did it ever return. The limb retained its restored temperature, which, however, never equalled, much less exceeded, that of the opposite limb; and although the mortification had not passed beyond the line of junction of the toes and foot, no line of separation had formed. The heart was examined almost daily; the impulse was always feeble; the two sounds were always audible; and there never existed any abnormal sound in the heart or large arteries.

Mr. Purser assisted me in making the *post mortem* examination. The lungs presented a well-marked example of emphysema: when the anterior wall of the thorax was raised they did not collapse, but

presented a pale and bloodless appearance. They had the usual soft, downy feel, and a section of them showed the widely dilated air vesicles. The same section also showed that a quantity of soft, unhealthy, greyish matter had been deposited throughout both lungs. This matter seemed closely adherent to the very terminal bronchial tubes, which were excessively congested, and the lower lobe of the left lung was particularly engorged. The valvular apparatus of the heart was perfectly healthy. The right auricle and ventricle contained a very firm clot of fibrin, which also passed into the pulmonary arteries, and into their large branches, but did not by any means fill these vessels; otherwise the contents of the cavities of the heart were semi-coagulated, dark-coloured blood. The heart itself answered most accurately to Paget's description of granular degeneration. The *post mortem* examination was made in very cold weather, about twenty-four hours after death; yet it was like a heart beginning to decompose. The muscular substance was easily torn, as if with separation of fibres that only stick together, and the torn surface was lobulated and granular like a piece of soft conglomerate gland. The lining membrane of the aorta was very extensively studded with small white spots, slightly raised above the surface. The arterial system of the lower half of the body was very extensively and minutely examined, and these appearances were found to exist over a very considerable extent of the arteries, and were exactly similar to the atheromatous patches, which Gulliver has proved to consist of fatty matter, and which appear to be partly formed at the expense of the middle coat, and partly deposited in a granular and globular form under the inner lining. The canal of the aorta was empty until we reached its bifurcation, when a solid mass of fibrin was found to block up the right common iliac artery. This clot was found to ride over, or be fixed on, the actual bifurcation, a very small conical piece of it projecting into the left common iliac artery. There was no further extension of it on the left side. This solid fibrinous mass extended throughout the arteries of the right lower extremity, homogeneous and continuous, from the commencement of the common iliac artery until we reached to about the centre of the leg. Down to this point the arteries had been completely closed by the fibrinous mass, there being no possibility of any blood passing either through it or by its side; and the lining membrane of the artery, and its other coats, presented no appearance of disease beyond the degeneration above mentioned, and that it was of a red colour; but from the point indicated, in both anterior and posterior tibial arteries, until we

reached their most minute branches, the lining membrane was of a deep red colour, and contained dark grumous blood, which again, as long as the vessel was of any size, contained a long black coagulum in the centre. The veins were healthy.

The spleen was swollen, soft, and contained numerous deposits of soft pultaceous exudation similar to those formed in the lungs. Both the liver and kidneys presented well marked examples of advanced stages of fatty degeneration.

The muscular structure throughout the body generally had, more or less, lost its usual healthy appearance, and assumed a pale yellow colour, was easily torn, and its substance was evidently loaded with oil globules; but when we came to examine the muscles of the calf of the right leg, where so much pain was complained of during life, we found them to be completely disorganized. The fleshy portions of the soleus, with the flexors and peronei muscles, had lost altogether their striated appearance, and were replaced by a substance not unlike rotten sponge, which tore on the least force being used, was of a dark grey colour, and seemed saturated with a thin oily fluid; it had, moreover, the appearance of boiled meat, fly-blown, or in a very early stage of decomposition, before any discoloration or fetor have commenced; there was no appearance whatsoever of any purulent infiltration. The entire body had a peculiar heavy odour, such as I have often observed from cases of extensive fatty degeneration. There seemed to be a most unusual quantity of fluid blood in the body, and that of a very dark colour.

There are several points of interest in this case. I would first allude to the fact, that cases of arterial obstruction may be mistaken for paralysis. It has been remarked by Graves and Stokes, that :[a] " In the advanced stages of this disease the diagnosis is not difficult ; there is paralysis, but this has not been preceded by symptoms of central or spinal disease, and the intellects remain undisturbed. To this the feeble pulsation, or its complete absence in the arteries of the limb, are to be added, and no difficulty will be experienced in recognizing the disease. In its early stages the diagnosis is more difficult."

The following case is from Cruveilhier :—" I am aware of a case in which the mistake lasted much longer. The nature of it was as follows:—A man, 64 years of age, was admitted into the surgical wards of an hospital, for lancinating pains, with sensation of cold in

the toes of the right foot. No one in the least suspected a threatening or existence of gangrene. An endeavour was made to restore the sensibility by sinapisms, and the introduction of acupuncture needles. The patient, being phthisical, was transferred into a medical ward. There it was still supposed to be an ordinary case of paralysis of the lower extremity, and it was not for several days after, that the true nature of the disease was discovered, when to the insensibility and coldness of the limb, discolouration was superadded."

It is clear, then, that cases of arterial obstruction may be mistaken for paralysis; and it may be worth consideration what are the symptoms which are so constant as to give rise to this error in diagnosis.

We find first, as in this case, *complete paralysis of sensation and motion*. The following are Cruveilhier's observations on this interesting point:—

" If the arterial circulation be not completely intercepted in the limb by means of the obstructing clots, nutrition is kept up; but sensation and motion may be either diminished in it or completely abolished, and that either for a time or permanently. I am not aware if there are on record cases of permanent paralysis from arterial obliteration which have not been followed by gangrene; but it is very requisite to distinguish paralysis of sensation and of motion arising from incomplete stoppage of the arterial circulation, from what may be properly termed gangrene, or more properly from paralysis, which is the first symptom of gangrene; and the more so because this paralysis, connected with gangrene, comes on suddenly, in a moment, and is often unaccompanied by any change of colour in the skin, or any of the physical signs of gangrene."

He then relates how it once happened to himself to be called to see a woman, about 40 years of age, the subject of a cancer in the breast, who had all the morning been walking about her room as usual, when she was suddenly seized with complete paralysis of sensation and of motion in the left upper extremity. " I confess," he says, " that I thought I had to do with an ordinary paralysis. I had the limb rubbed with spirit lotions, and then wrapped in warm flannels; but after some time, being struck with the cadaveric aspect of the limb, and seeing that in some places the rubbing had taken off the cuticle, I saw my mistake, and I pronounced it to be a form of gangrene, which I have since called ' gangrene by cadaverisation,' and which the event but too fully confirmed."

But, again, we find this paralysis, as also in the present case, preceded or accompanied by excessive pain in the limb, which may be mistaken for neuralgic pain. This point is also well illustrated in "Cruveilhier's Pathology." A lady, sixty-seven years of age, was bled in the left arm for a pneumonia. Four hours after the venesection she was seized with acute pain from the points of the fingers to the bend of the elbow on the same side, with paralysis of sensation and of motion of the hand. The lady referred the paralysis to the bleeding, and thought that a nerve had been wounded. The next day Cruveilhier saw her, and found the paralysis of sensation and of motion confined to the left hand. She could not possibly either flex or extend the wrist, and was complaining also of excessive pain in the fingers. I considered (he says) the paralysis to be confined to the hand; that this combination of paralysis and pain had its seat not in the brain, but in the nerves of the hand; and that this cause was a rheumatism, fixed in the cutaneous and muscular nerves of the hand. However, having discovered that the pulse was not to be felt in the affected side—that the radial artery was small, hard, and painful on pressure, I added to my note that the paralysis, purely local, was referrible either to a lesion of the nerves or to a lesion of the arterial system. The following day gangrene took place.

These are the points which make the diagnosis difficult in the early state—the suddenness and completeness of the paralysis of sensation and of motion, and the intensity and perseverance of the pain. In some cases the pain precedes the paralysis by some days—a circumstance which is even more calculated to deceive.

The means of diagnosis on which we have to rely are briefly these :— 1st. That the paralysis from arterial obstruction is always accompanied with coldness of the limb, and a peculiar whiteness of the skin, like to that of a corpse: the limb is, in fact, deadened. To these Cruveilhier adds that, in this form of paralysis, the absence of sensation and of power of motion is, to use his own form of expression, as *complete as possible;* whilst it is rare to see a complete paralysis from lesion of the nerves. The finding the artery or arteries painful on pressure, and like a cord under the finger, would, of course, complete the means of diagnosis.

With regard to the immediate cause of these two prominent, very formidable, and distressing symptoms—the intense pain, and the paralysis with which the disease is ushered in. Acute pain appears to be almost invariably connected with a sudden obliteration of any part of the arterial system; it enters prominently into the history of

those cases where a large artery is obliterated by a mass of fibrin; and is, in all probability, caused by the excessive sudden distension of the coats of the artery behind the occlusion, which distension we know, in some instances, to amount to actual rupture. Cruveilhier's experiments lead, I think, to this conclusion, although the inference he drew from them was different. When he injected mercury into the femoral artery there was, at first, very little pain; but when, in a short time, the main artery of the limb became occluded, the pain was intense, as he himself terms it, *atroce*, excruciating. The pain clearly does not arise from inflammation. Cruveilhier, evidently at a loss to account for it, says it arises from a sort of struggle between life and death in parts deprived of their means of nutriment.

The paralysis of motion and of sensation are, perhaps, more easily accounted for. Passive motion of the limb causes great increase of suffering, so that it might be supposed that the want of power of motion of the limb arose simply, as we see every day in cases of acute articular inflammation, from the patient being unwilling to add to his sufferings, and to which condition the term vital anchylosis has been very happily applied. But this is not so; and, even if it were, would not account for the absence of sensation. Both phenomena are produced by the nerves being suddenly deprived of arterial blood, their usual stimulus and nutriment.

The next point of interest in this case is the consideration of the nature of the affection under which he laboured—whether it was an original active arterial inflammation, and if so, when this inflammation commenced; or were the arterial changes consequent on other disease.

Before this boy was sent to school, he was badly fed, badly clothed, and lived in very impure air—three evils which, when combined, are certain to produce degeneration of textures, which, in the present instance, instead of mere destruction of tissue, was led by circumstances to take on the form of fatty transformation; which, as Williams observes, under whatever circumstances it occurs, is obviously a process of degeneration or degradation to a low scale of animal or even vegetable life.

*Post mortem* examination showed that there was scarcely an organ in the body which was not affected by this fatty degeneration, and with the rest, the arterial system showed extensive marks of such disease. If these adventitious growths (which, whether fatty or not, must, as Hasse observes, at all events be considered not as a local disease, but as referrible to some constitutional cause), are capable of retard-

ing the circulation, and causing deposit of fibrin in the large arteries, as we know they do in the aorta, how much more will this be likely to occur in the small vessels.[a]   In this way the circulation through the capillaries of the right and lower extremity was retarded, and, as occurred in so many of Cruveilhier's experiments, when the circulation had been obstructed to a certain extent in the capillaries and small sized arteries, there was then a sudden and complete stoppage of the circulation through the main artery, accompanied by the sudden accession of the formidable symptoms enumerated.   The different effects observable in the condition of the vessels above and below a certain point in the leg, point clearly to two different causes: from the aorta downwards was clearly coagulated arterial blood; from the capillaries of the foot upwards to where the two points met was also blood, but deposited slowly, under circumstances more favourable for its decomposition.

The condition of the lungs was particularly worthy of observation.   I had seldom seen exactly similar appearances, nor can I find that they are of ordinary occurrence.

They presented somewhat the appearance of partly-wetted sponge, but were not in the least softened or collapsed.   They were of a dark grey, or lead colour.   When squeezed, they gave out a quantity of thick, oily fluid, which greased the hands, and had a peculiar heavy odour, but not at all like that of gangrene.   When cut, they presented a rough, granular section, and showed an immense number of circular openings, more or less large, which were evidently dilated pulmonary cells; and in many of those were found a similar thick, oily, but discoloured fluid.   The appearances were totally unlike those produced by pneumonia in any form, or by any ordinary phthisical degeneration.   I therefore conclude that they were produced by an acute fatty degeneration of the pulmonary substance—the same disease which pervaded almost every structure in the body.   It is now many years since Mr. Rainey, of St. Thomas's Hospital, described a certain form of emphysema of the lungs, as originating in fatty degeneration of the pulmonary membrane; and it would appear in the present case that, in addition to the air cells having become dilated by the degeneration of their delicate lining membrane, there was a deposit of oleaginous matter in the dilated cells.

Hasse seems to have met with such a case, and although he

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[a] See *post mortem* examination of Case VII.

attributes the appearances to *pneumonia*, he is evidently not satisfied with his own explanation of it. It is to be regretted that he does not give more particulars of the case. His account of it is as follows :—

" In an instance of considerable emphysematous dilatation, in a man who died of pneumonia, the diseased patches of the lung presented such peculiarity of appearance, that I at first entertained doubts respecting the real nature of the malady. The cut surface appeared as if besprinkled with dull-yellow granules of irregular shape, mostly the size of hemp seed, and of the consistency of soft butter or thick pellets of pus. These granules imperfectly filled little smooth cavities, likewise of irregular shape. They might have been mistaken for tubercles: all doubt, however, was removed by their aspect, their seat in pulmonary cells obviously dilated, their gradual transition into the ordinary bronchial mucus, their occurring at the anterior portion and at the margins of the inferior lobe of the right lung, and in the midst of gray hepatization (presenting in a conspicuous manner all the gradations from undilated to thoroughly emphysematous parts), and finally, by the fact, that no tubercles were discoverable elsewhere ; to which may be added the symptoms observed during life."

It is rare to meet with such extensive fatty degeneration in any one individual, but particularly in one so young. Cases of fatty degeneration of the heart have occurred in children six and eight years of age, and have been described by Barlow and Ormerod. But in the present case, scarcely a tissue in the body appears to have escaped its influence; and while it appears to have made much further inroads on other organs, its effects on the arterial system were more directly fatal; nor is it the least remarkable circumstance in the case, the immense disproportion which was found to exist between the small extent and degree of gangrenous action which had taken place and the great amount of arterial circulation which was obstructed.

VII.—*Case of Typhoid Pneumonia; Treatment by Sulphate of Quina; Death from Impaction of Fibrinous Concretion in left Pulmonary Artery.*—A labouring man, 40 years of age, was admitted into the Hardwicke Hospital, on the 17th of February, complaining of great oppression of his breathing, and pain in his chest, with which he had been suddenly seized. His respiration was short and rapid, his pulse small and frequent. He was very weak; when

required to sit up in bed he almost fainted; and his countenance and whole manner indicated great prostration. His skin had a very light yellow tinge, and there were a few very small petechial spots over his body. He had the physical signs of solidification of at least the upper half of the right lung, but he had very little cough, and no expectoration; coughing or deep inspiration increased greatly the pain in his side. The treatment pursued was the administration of calomel, opium, and James' powder every three hours, with repeated applications of spirit of turpentine over the affected side. He said that he was perfectly well five days ago, and that his illness was brought on by continued exposure to wet and cold. On the 19th there was no perceptible improvement, the calomel and opium was discontinued, and he was ordered five grains of sulphate of quina every three hours. On the 20th his pulse had fallen from 128 to 116 in the minute; on the 21st to 100, and he had begun to perspire copiously; on the 22nd he appeared much improved; his pulse had come down to 80, and his respiration to 30 in the minute; he could inspire with comparative freedom, and the sense of weight on his chest had quite left him. The perspiration continued, and he took beef tea and other light nutriment freely, and appeared to have escaped all immediate danger. There was not, however, very much improvement in the local symptoms. The bronchial breathing and bronchophony continued, but there was vesicular murmur audible lower down in the lung than at first. He continued to improve on the 23rd; his pulse had on this day come down to 70, and his appetite was improving. There was now, for the first time, a very loud systolic murmur audible at the top of the sternum. On the night of the 23rd, whilst sitting up in bed laughing and talking with a patient beside him, he suddenly gave a loud scream, pressed both his hands to his chest complaining of intense pain; his breathing immediately became excessively rapid and laboured; he broke out into the most profuse cold perspiration; his chest heaved, gasping for breath; in a few moments he had a slight convulsive fit; vomited some brown fluid, and his bowels were moved involuntarily; his lips became blue, and his pulse, small and irregular, at length ceased altogether The resident pupil saw him immediately, and made no small exertions to relieve him, but he sank with frightful rapidity, and he was dead in less than a quarter of an hour from the commencement of the attack. Such a history led me to expect that I should find a rent in, or perforation of, some of the thoracic viscera; but such was not the case. I made a careful examination of all the cavities

seriatim.    The upper lobes of the right lung presented an example
of a form of pneumonia which I had not seen for some time.    It
was that form which was epidemic in this city many years ago, and
which, from the peculiar colour of the lung, was termed " blue
pneumonia," the pathology of which form seems to consist in the
blood vessels being distended with unoxygenated blood, which
excludes the air from the smaller air tubes.    An accurate account
of its morbid anatomy and pathology will be found in the Transac-
tions of the Pathological Society.[a]  In appearance it closely resembles
carnified lung, but differs from it in the very material circumstance
of retaining its original bulk.    Such was the condition of a consi-
derable portion of the right lung; of a blue colour, the consistence
and feel of muscle, it sank in water, but retained its natural size,
or was perhaps a little larger than natural.    The lower portion of
this lung was slightly emphysematous, as was also the entire of the
left lung, although the pleural cavity at this side was obliterated
by old adhesions.    The bronchial mucous membrane of both lungs
was highly congested.

On opening the aorta, at the distance of about half an inch
from the aortic valves, there were found two small spots of
rough lymph deposited on its lining membrane, and as if grow-
ing from it, these were found to be deposited on two spots of
atheromatous degeneration in the aorta, but there were no further
signs of aortic inflammation.    The tricuspid valve was thickly
entangled with fibrinous exudation; this exudation was granular,
gritty, totally different in appearance and feel from fibrin as
ordinarily deposited.    There was also a small portion of the same
structure, about the size of a very small hazel nut, lying in the apex
of the right ventricle; the right cavities of the heart were otherwise
gorged with black semi-fluid blood, which also distended the
pulmonary artery, and on opening up this vessel we found a large
mass of the same fibrinous substance, completely occluding its left
branch.    This concretion, which appeared to be composed of a
peculiarly fine gritty matter mixed up with the fibrin of the blood,
formed a solid plug, completely closing up the left branch of the
pulmonary artery; beyond it the arteries were empty, while behind
it the right ventricle and auricle were full of black coagulated blood,
and a large coagulum filled up the trunk of the pulmonary artery.
This coagulum, however, was of totally different consistence and

* *Vide* Trans. Pathological Society, Vol. i., p. 53 and 71.

material from the fibrinous plug referred to; but a substance similar
to this latter, and about the size of a very small nut, was found in
the apex of the right ventricle; and also interlaced into the different
meshes of the tricuspid valve was a similar substance, with larger
masses appended; a section of these showed that they were under-
going a process of softening in the centre. The abdominal viscera
were healthy.

The brain, but more particularly its investing membrane, presented
very intense vascularity; there was not, however, any extra-vascular
effusion whatsoever. The arachnoid membrane seemed perfectly
transparent and normal, nor was there any subarachnoid effusion.

The foregoing case presents at least two points of interest—1st,
I would allude to the success of the mode of treatment by quinine
in this form of pneumonia, thus removing from it the grave charac-
teristic which it bore when first described by Dr. Corrigan, as " an
idiopathic form of disease characterized chiefly by an atonic state of
the vessels, and in which the symptoms were not amenable to any
of the usual modes of treatment." It is now several years since I
drew attention to the value of quinine in the treatment of typhoid
pneumonia, and a very extended experience since has confirmed me
in the remarks which I then submitted upon this very important
subject.[a] I would now only allude to the fact of the apparently
complete recovery, as far as the general symptoms are concerned,
as evidenced by a slow pulse, normal respiration, complete freedom
from fever, pain, and dyspnea, while a considerable portion of the
lung still remains in such a state of solidity as to completely
exclude air. This fact was not new to me; I had often recognised
it before, by the physical signs, but never had an opportunity
of verifying, by *post mortem* examination, the fact that the
lung remains for so long a time so little altered from its diseased
condition. It has frequently occurred to me to find, even after
convalescence was apparently established, and the patient seeking
his discharge from hospital, that the lung still remained solid, evi-
denced by the persistence of bronchial breathing and bronchophony,
with dulness on percussion Such cases are very intractable and
difficult to cure; persistence in the use of quinine, in the same or
modified doses, is useless, as is also the ordinary treatment by any
form of mercury; indeed, I would go farther and say, that mercury
usually does much harm. I have more than once seen in such

[a] See Vol. xxii., p. 95.

cases, treated with this mineral, symptoms of pulmonary phthisis to supervene, and this disease to run an unusually rapid course; but I have always experienced much advantage, and, in many instances, a rapid cure, from change of air, counter irritation, and the administration of iodide of potassium with bark: while the iodine acts as a resolvent of the coagulated fibrin, the bark seems to exert its tonic powers on the capillary vessels of the lung.

But the second, and perhaps the chief, point of interest is the mode in which this patient's death occurred.

On this point I would observe, that the substance found in the left pulmonary artery was truly a fibrinous concretion—or, as it is now commonly termed, an *embolus,* and not simply coagulated blood. It fulfilled two of the four conditions laid down by the late Dr. Hughes, under any one of which he considered "the evidence of the fact decided and incontrovertible." First, it was entirely separate and detached from the coagulum which filled up the remainder of the vessel; and, second, certain chemical changes, the result of degeneration, were observable in the concretion, and which were not to be found in the accompanying coagula.

I cannot, from this case, add much to the symptoms originally laid down by Hope as diagnostic of this affection; but it bears record most fully to the accuracy of his description:—" Sudden and excessive aggravation of the dyspnea, without any other obvious adequate cause; the pulse small, weak, irregular, intermittent, and unequal; the patient, in agony from an intolerable sense of suffocation, cannot lie for a moment, and continues tossing about in the most restless and distressed condition, until his sufferings are terminated by death. During this state, the surface and extremities are cold, the complexion livid, and in most cases there is nausea and vomiting of all ingesta." There were also present, in this instance, the convulsive movements and stupor which Bouillaud met with in a similar case.

The great rapidity with which death supervened was, of course, owing to the large extent of the right lung which was already rendered useless, by the state of solidification to which it was reduced. The emphysematous condition of its lower portion, and of the left lung (although placed in such an unusual and unfavourable condition for its occurrence) bore witness to the immense efforts which nature made to readjust the respiratory process. I have already elsewhere alluded to this[a] condition as constant upon fibrinous con-

[a] Vide Dublin Hospital Gazette, N.S., Vol. ii., p. 345.

cretions in the right side of the heart or lungs, with which it seems to be intimately connected.

The diagnosis is now comparatively easy of *emboli* discharged from the left side of the heart; and cases are almost daily recorded in which their occurrence has been recognised during life, and suitable treatment accordingly been adopted; but, inasmuch as the general signs indicative of their existence in, or discharge from the right side of the heart occur in all cases in which there is an extreme obstruction to the circulation through the heart, whatever be its cause, the diagnosis of their occurrence during life, as emanating from the right side, is peculiarly difficult; so much so that perhaps we are not yet in a position to predicate of their existence without actual *post mortem* investigation. The following case, however, still under investigation, I have held forth as an example of this very peculiar affection :—

VIII.—*Case of Sudden Acute Bronchial Congestion, supposed to have its origin in the Obstructed Pulmonary Artery.*—Anne Byrne, a servant in a large dairy, was carried to the Whitworth Hospital, on the 7th of March, in a state of collapse. By the aid of stimulants, chiefly external, she was partly roused from this condition, and we then learned that three days before she was in perfect health; that without any known cause she found her breathing getting short, and that this dyspnea hourly increased. On the morning of the 7th she had a slight convulsive fit; and in the collapse consequent on it she was admitted into the hospital. She was stupid, listless, very drowsy; her face congested; lips blue; surface of the body cold, and more or less livid. There was no complete paralysis of sensation or of motion; but her limbs retained no strength; she could not be put in the erect or sitting posture for a moment for fear of syncope. The radial pulse was extremely weak, and the heart's action was feeble, wavering, and almost imperceptible; no cardiac sound, normal or abnormal, could be heard; but a deep, loud, sonorous *rale* permeated the entire chest. This sound appeared to emanate from a point beneath the sternum, and from thence to radiate in all directions; the respiratory murmur was scarcely to be heard in any part; there was no albumen in the urine.

I had considerable difficulty in coming to a conclusion as to the nature of this case. The symptoms were evidently produced by the brain being gorged with venous blood; but this was clearly a

secondary lesion; it was no ordinary case of bronchitis either in symptoms or in physical signs. It resembled most a case of tracheal obstruction: but not from a foreign body within the trachea, for, first, there was no history of the introduction of any such. Second, the symptoms did not supervene suddenly, but were three days accumulating. And third, the respiratory murmur was equally feeble, and the tracheal *rale* equally loud throughout both lungs. And, on the other hand, an illness of only three days was unusually short for the accumulation of symptoms of pressure from an aneurismal or other such intra-thoracic tumour as is ordinarily met with.

I treated the case with external stimulants, warmth, and friction, to restore the capillary circulation; blisters to the region of the heart, and whiskey and ammonia internally.

She slowly recovered from the collapsed condition, and, in proportion as she did, her cough became very troublesome, and she was more than once in imminent danger of syncope from attempting to sit up in her efforts to cough. Great and permanent congestion of the jugular veins was now superadded to the other symptoms, and she complained of intense pain in her heart. She very slowly amended until the 12th, when, after using some slight exertion she fell back exhausted and apparently moribund. She was only aroused by the momentary exhibition of a powerful carbonate of ammonia emetic, which, however, had the desired effect of restoring animation, and in an hour after she was altogether in a better condition than she had been hitherto. On the 13th she had another attack of syncope, less severe, and from this also she was aroused by an emetic dose of carbonate of ammonia. From this time she has continued to make daily progress; for several days she took six grains of carbonate of ammonia every four hours, with large doses of wine and whiskey. On the 21st she was improved considerably, natural warmth and heat were restored to the surface; her pulse was 120, but on the least exertion it intermitted and failed in strength; her breathing is easy, and the cough much less. The treatment was altered to chlorate of potass and chloric ether; wine and whiskey being continued. On the 10th of April she is convalescent; there is no evidence of valvular disease of the heart.

I think the diagnosis was borne out in this case *par voie d'exclusion*, and by the fact, that a permanently distended pulmonary artery does exert great pressure on the root of the trachea, immediately above the bifurcation, the point whence the tracheal *rale*

emanated in this case. The non-arterialisation of the blood was, of course, owing to the interruption in the pulmonary artery, not to the pressure on the trachea. The mode of treatment which proved successful in this case tends also, in my opinion, to confirm the truth of the diagnosis.

Art. XVI.—*Clinical Reports and Observations on Medical Cases,* By J. T. Banks, M.D., T.C.D., King's Professor of the Practice of Medicine, &c., &c.

*Empyema—Paracentesis and the Employment of the "Drainage" tube.*—To all who are versed in the history of medicine it is well known that the operation of thoracentesis is one which has numbered among its advocates some of the most successful cultivators of the healing art, and it is also matter of notoriety that, owing to one of those revolutions from which even physic is not exempt, it may be said to have for a season fallen into comparative disuse. However, it is again enjoying as high a place in the estimation of practical physicians as at any former period, and it is now resorted to with a confidence in its remedial power fully equal to that which was evidently entertained by practitioners of the olden time.

The recorded cases and observations of eminent physicians at home and abroad have largely contributed to this result, and it is now adopted in many cases with a well grounded hope of success, while in others the not unimportant end is attained of alleviating pain and suffering, and prolonging, though we cannot save, life.

That in a great number of instances the failure of the operation was owing to its being postponed to too late a period, I am perfectly persuaded. The early operation—that is to say, as soon as all reasonable hope of the fluid being absorbed must be abandoned, and before the lung is bound down by unyielding adhesions—is sometimes followed by *complete* recovery; but even when we cannot, from the duration of the disease, look forward to perfect restoration of the function of the lung, present danger may be averted, life may be saved, and even years, in some cases, may be gained. Few physicians who have enjoyed extensive opportunities of treating disease, taking a retrospect of cases of pleural effusion, cannot refer to cases which might have been saved if the operation of thoracentesis had been performed, more especially if the system of drainage, first recom-

mended in chronic abscesses by M. Chassaignac, had been resorted
to.

There are many cases on record, in which there was little more
than palliation of urgent symptoms anticipated, but which eventuated
in restoration to health.    In reporting a case of empyema some
time since, I observed, "whatever difference of opinion may exist
as to the operation being called for under ordinary states of pleural
effusion, there cannot be a question as to the propriety of it when
dyspnea is so urgent as to threaten life.    There are cases when
a few days of life are of incalculable importance, and even
independently of this consideration, if we can render the few
remaining days of life comparatively comfortable and free from
suffering, and that this great gain can be obtained by a trivial and
almost painless operation, surely we ought not to hesitate."    The
experience derived from the observation of many cases warrants us,
although ultimate recovery is not always a probable event, in holding
out the expectation of lengthened days.    Legroux performed in one
case 24 successive operations.    Wunderlich, in his *Handbuch der
Pathologie und Therapie*, relates a case of empyema in which he
operated three times in the course of six months; before each
operation death appeared imminent, but the operation had the effect
of prolonging life for one year, at the end of which death ensued,
not however from the original malady, but from consecutive
Bright's disease.    Age, even advanced, should not preclude the
operation, or lead us to despair of a prosperous issue ; the same
author reports two examples of successful result from the operation
of thoracentesis in aged persons, one of whom he saw many years
after in perfect health.

There are cases in which, from the duration of the disease, we
cannot expect expansion of the compressed lung; but still life may
be prolonged when a fistula is established.    Dr. Wendelstad, of
Hersfield, who was himself the subject of the operation of thora-
centesis, at the end of 13 years placed his own case on record in the
*Journal der Practischen Heilkunde.*    For this lengthened period the
fluid was drawn off twice each day ; sometimes as much as three
ounces flowed away, and at other times not more than half-a-drachm.
After 10 years, anxious to determine the capacity of the chamber, he
injected it with warm water, and found that it was capable of contain-
ing one quart ; the chest had fallen in and was motionless ; but he could
blow the flute, walk fast, and, when he published the history of his
case, he had been for many years again engaged in active practice

as a physician. How much longer he lived we have no means of ascertaining. The operation of tapping the chest is occasionally performed in cases of pneumo-pyo-thorax, when the disease is the consequence of perforation of the pleura in tuberculosis of the lung. How desperate such cases are, oft-repeated experience informs us; but, nevertheless, Laennec says, " We must not abandon all hope of cure, even when there exists so serious a complication as this, provided there be no evidence of cavities in the opposite lung." Although, in the great majority of cases of perforation of the pleura, the consequence of tuberculosis of the lungs, or gangrene, there is a communication established with the bronchi, still, we should remember that a tubercle on the surface may be the cause of the lesion, and the effusion of air be the result of the opening of vesicles, as in the case of rupture in emphysema. Of this form, Louis has given some examples.

The following case will illustrate the truth of some of the foregoing remarks, with reference to the value of the operation of thoracentesis:—A boy, aged 14, was admitted into Sir Patrick Dun's Hospital on the 11th of April, 1861, labouring under pleural effusion of the right side; he was one of a family of seven children, all of whom were remarkably healthy; both parents are alive; the father is, and has always been in good health; the mother generally delicate, and has had repeated attacks of bronchitis. The subject of this report had measles and scarlatina in childhood, but recovered perfectly, no delicacy remaining behind; at the age of seven he had hooping-cough, after which, for one year, it is stated that he was delicate, but, at the end of this period, his health was completely re-established, and he continued well until three weeks before his admission into hospital. He is very intelligent, and he gave an accurate history of his present illness. He said he was well previously; that he shivered, and soon after was attacked with severe pain in the right side. The ordinary symptoms of pleuritis followed. For some days before he sought admission into hospital, his respiration was gradually becoming more laboured, and finally the difficulty of breathing became extreme.

The pulse was 132, and the respiration 40 in a minute. On examination of the chest, the right side appeared larger than the left, and, on measurement, it was one inch larger; the intercostal spaces obliterated, and there was no motion. The sound, on percussion, was dull over the whole extent of the right side, and the dulness even transgressed the median line. On applying the hand,

when the patient spoke or coughed, no vibration was perceptible, and the respiratory murmur was absent, no sound being audible, except bronchial breathing at the root of the lung. There was displacement of the abdominal organs—the liver projecting below the false ribs. The decubitus was on the affected side; any attempt to lie on the left produced greatly increased difficulty of breathing.

The symptoms were so urgent that the operation of thoracentesis was determined upon, and I performed it the day after the boy came into hospital. As the fluid flowed, the respiration became more easy, and he expressed himself wonderfully relieved. At the end, the pulse had fallen to 112 and the respiration to 28. The amount drawn off was four pints. The fluid was of a straw colour and perfectly transparent. On the following day the respiratory murmur was audible at the apex of the lung. There was a remarkable amelioration of all the symptoms for about a week after the operation, but soon it became evident that fluid was again being accumulated, and at the end of six weeks it became necessary to resort to the operation of tapping, and the result was in all respects similar. The quantity and quality of the fluid being the same, and the relief as manifest. Again the signs of accumulation gradually showed themselves, and, at the expiration of four weeks, the operation was again performed. At this period he passed from under my care, and my colleague, Dr. McDowell, took charge of him for three months, during which he remained in Sir Patrick Dun's Hospital. The disease continued to run the course I have described. After the third tapping the secretion of fluid took place rapidly, and the symptoms were so urgent that it was found impossible to put off the operation beyond a fortnight.

From Sir Patrick Dun's Hospital he was removed to the Whitworth Hospital, again coming under my care. Four weeks after the last operation he was again tapped, and in five weeks the operation was repeated now for the sixth time. The average quantity was about five pints, and the fluid retained the same character which distinguished it at first; it was straw-coloured serum, transparent, and without a trace of pus. In three weeks the operation was repeated, and on this occasion the fluid was sero-purulent. The fluid rapidly accumulated, and the respiratory distress was so great that the operation was urgently demanded on the eighth day. The fluid was purulent, but free from disagreeable odour. The case appeared at this stage likely to terminate fatally, if some measure were not adopted to prevent the recurrence of the

effusion; the strength had been latterly failing in a marked manner, and the respiratory distress increasing. Under these circumstances I determined to have a counter-opening made in the chest, and a drainage tube introduced. The operation was performed by my colleague, Professor McDowell, on the 24th of October, 1861.

I was induced to have recourse to this operation from seeing a report of " two cases of empyema illustrating the advantage of making two openings, and adopting the plan of ' drainage ' in the operation of paracentesis in that disease," by Dr. Goodfellow, of London. On reading the history of these cases in the 42nd Vol. of *Medico Chirurgical Transactions*, I was convinced of the advantage of the plan proposed, and that the case under my care was peculiarly adapted to it; it was, in point of fact, a much more favourable case than either of Dr. Goodfellow's, and more likely to terminate in recovery, particularly if the operation had been performed at an earlier period, but I had not seen the report of Dr. Goodfellow's cases until the boy had been tapped seven times. The question which we had to consider was, whether it was not too late to expect any advantage from the drainage plan. However, unpromising as the case was, I determined to give the patient a chance.

Before detailing the further course of events in my case, I may refer to Dr. Goodfellow's report. The first case was a boy of 17, a member of a strumous family, who, at the age of 12 had measles, followed by inflammation of the lung, terminating in abscess. He had subsequently empyema, which pointed, and a large amount of purulent matter was discharged. Upwards of two years after the fistula was established, the boy came under Dr. Goodfellow's care, who says that there was considerable emaciation, occasional hectic flushing, legs and feet œdematous, difficulty of lying in the recumbent posture, frequent cough with copious purulent expectoration. The affected side was flattened, and measured an inch less than the opposite, the opening red, irritable, and discharging very offensive pus. The physical signs were, dulness on percussion at the apex, lower down a tympanitic sound, and below a dull sound which was replaced by a tympanitic sound on his lying down. Amphoric respiration, voice, and cough also existed. A counter-opening was made in the chest, and the drainage tube introduced, and Dr. Goodfellow says "the success of the experiment exceeded our most sanguine expectations." The discharge, which was intolerably stinking, was reduced in quantity, thick, and nearly free from odour.

The improvement in his general health was rapid, the œdema of the legs quickly diminished. At the end of three months the discharge was reduced to two or three drachms in the twenty-four hours.

The second case given by Dr. Goodfellow was one of the most unfavourable which can be well conceived. Dr. Watson, who saw the young man before his admission into the Middlesex Hospital, concluded that he had pneumothorax, and that a communication had been made between the lung and the cavity of the pleura, in the progress of tubercular disease. He had had profuse hemoptysis. Subsequently there was indubitable evidence of effusion in the left pleural cavity, there was also evidence of tubercular consolidation of the apex of the opposite lung. Dr. Goodfellow hesitated as to the propriety of recommending the operation, owing to his belief in the tubercular origin of the empyema. The lung had been compressed by fluid for more than a year. The operation was however performed—paracentesis by a double opening and the drainage tube. The result was similar to the former; the patient gradually improved in health. This second case is most valuable, as affording an illustration of the benefit derivable from the operation, even under circumstances which might well be looked upon as affording the least possible ground for hope. Even, then, in pneumo-thorax with effusion, the consequence of tubercular disease, operation is not only justifiable, but may in some instances save life.

I have no experience of the effect of iodised injections in the treatment of empyema, but the practice is strongly recommended by Trousseau, whose opinion, on all subjects connected with practical medicine, is worthy of the greatest respect. He reports three cases of hydropneumo-thorax, treated by paracentesis thoracis, and injections of iodine, which have had a successful issue, (*L'Union Medicale*). The injection which he uses is composed of equal parts of water and tincture of iodine (5 grammes of each), with 2 drachms of iodide of potassium. It appears to me that the iodised injections might be employed with advantage in cases treated by the drainage plan in the first instance. When the size of the original cavity has been considerably reduced by the expansion of the lung and the falling in of the chest, but that still the discharge goes on, the case might be brought more rapidly to a favourable termination by the withdrawal of the tube, and then washing out the cavity with tepid water, and subsequently injecting with the solution. In my case I have been thinking of having recourse to it. It is now more

than five months since the last operation was performed and the drainage tube introduced, and there is still about from two to three drachms of purulent matter coming away daily. The chest has fallen in considerably. The right side measures one inch and a half less than the left, the heart is displaced, being drawn to the affected side. There is respiration audible in the upper region of the right side, in front above the nipple, and posteriorly over a like extent. The left lung appears to be in a state of perfect health, and well performs its functions.

There was one phenomenon noticed in this case repeatedly, not only by myself, but by my colleagues, Drs. McDowell and Gordon, namely, the presence of amphoric respiration, voice, and cough. This is a confirmation of the correctness of Skoda's views on this subject. He does not consider a communication with the bronchial tubes essential to the production of resonance, but believes that the vibrations of the voice transmitted through the pleura produces consonating vibrations in the air contained in the cavity. In this case there was not the slightest ground for suspecting a communication with the lung. No air existed in the pleura until after the operation of thoracentesis.

In advocating the operation of tapping and the use of the drainage tube in some cases, I do not wish to be supposed to undervalue the preparations of mercury and iodine, used both internally and externally for the resorption of the pleuritic exudations. The power of these remedial agents is well known, and fully appreciated, but they will often disappoint, and then we must not postpone the operation too long. Dr. Goodfellow would restrict the employment of thoracentesis and the drainage plan to the cases of pleural effusion, which may be correctly designated pyothorax. He would exclude cases of serous effusion  In this opinion I do not concur; and the case I have before me is one in point. When, after we are satisfied that there is no chance of absorption—the fluid collecting after each operation—why wait until it becomes purulent? I believe the early adoption of the drainage plan will give a better chance of success; and I may mention that I have been in the habit of using Dr. Wood's instrument for the purpose of determining the quality of the pleural fluid, and it answers admirably as a means of exploration.

As to the general treatment of this case, which is still under my observation, it will suffice to say, that it has been to the fullest extent of a sustaining character; the boy had the most nutritious, diet, with a liberal allowance of wine, and for a very considerable

period he has taken cod liver oil. He is now steadily gaining ground. He walks out daily, and he is altogether in a most satisfactory state.

Touching his future, and that of similar cases, the law laid down by Louis, and confirmed by the experience of Aran, is not consolatory, namely, that uncomplicated pleurisy is always at the left side. The latter goes so far as to affirm, that the existence of the disease at the right side indicates the presence of tubercles in 95 cases out of a 100. He strongly advocates the operation of thoracentesis, regarding it as one of the greatest triumphs of our art, and one of the most powerful therapeutic agents we possess.

In conclusion, I have to observe, that the issue of this case and of those published by Dr. Goodfellow, is calculated to inspire hope from the operation when all other means fail. How unlikely was my own case to turn out well, may be judged from the fact, that it was suggested to me, that having recourse to the drainage operation would be likely to throw discredit on the new plan—so unpromising was the aspect of affairs.

My friend, Dr. McDowell, has favoured me with the following notes of the operation and of his views as to the best manner of performing it, which I consider a most valuable contribution.

In the case of Hill, the drainage tube was introduced into the pleura in the following manner:—

" The cavity of the chest was directly punctured with a bistoury between the fifth and sixth ribs, in the vicinity of the nipple, and about the same place where paracentesis had been repeatedly performed, both by myself and by Dr. Banks. Thin pus escaped in considerable quantity; a ' bullet probe,' about 10 inches in length, to the eye of which the drainage tube was fastened, was then introduced, and directed towards the point where the counter opening was intended to be made; owing, however, to its length and slender construction, the instrument could not be made to press against the parietes with force sufficient to enable it to be felt with the finger from without. A steel sound was, therefore, introduced instead, and with this instrument we found that the interior of the pleura could be satisfactorily explored. The point of the sound was now pushed against one of the lowest of the intercostal intervals, and could be plainly felt whenever the handle of the instrument was depressed; a small incision was then made over the rounded end of the sound, which was pushed through the opening from within. It was then evident that the solid sound, however suitable as a guide

for making a counter opening, was not adapted for completing the desired object, as the drainage tube could not be attached to it; it was therefore withdrawn, and the long probe, armed with the tube, was again introduced, but great difficulty was experienced in finding the second orifice. After some delay the probe was at last guided to the opening, on a director being introduced from without to meet it. From the unexpected difficulty which was experienced in finding the second orifice from within, it is obvious that the instrument which is employed in the first instance as a guide for the counter-opening, should be such as will allow the drainage tube to be fastened to it when it is made to project through the pleura; so that, on its being withdrawn, the tube which follows in its track would be left *in situ*. A 'Brodie's Catheter' would, I believe, fulfil every indication; and should I have occasion again to perform this operation, I would proceed in the following manner:—

" A direct opening being made into the pleura in front, with a bistoury, the catheter would be introduced; the cavity could then be rapidly explored, and the position of the upper surface of the diaphragm determined. Guided along the surface of the diaphragm, the catheter would thus be directed towards the outer and lower part of the chest, and the point made to press against an intercostal interval, as near the diaphragm as possible, so as to be felt from without. A 'Brodie's Catheter,' being furnished with a broad flat handle, would admit of this very essential part of the proceeding being done with great facility. The counter-opening would then be made by cutting on the point of the catheter sufficiently to allow it to be pushed through the wound. The drainage tube being attached by a silk thread to the eyes of the catheter, on withdrawing the latter, one end of the tube would be carried after it into the pleura, and out at the opening which was first made."

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ART. XVII.—*On a Double-bell Stethoscope.*
By ROBERT D. LYONS.

THE frequent necessity of comparing and contrasting sounds of delicate character at opposite sides of the chest, or in different portions of the vascular system, led me, some years since, to invent a form of double stethoscope, which appears to me to possess some practical advantages in diagnosis of both heart and lung diseases.

Inspection of the accompanying figure will readily convey an idea of the form and uses of this instrument. It is fashioned in gutta percha, and, being somewhat flexible, easily admits of adaptation of its two bells to the parts about to be examined.



A little practice will enable the observer to distinguish the sounds conveyed by the two branches of the instrument respectively. Sounds emanating from opposite or distinct points can thus be submitted to careful comparison and analysis by the *same* ear. The comparative *tone, intensity, duration,* and other characters of pulmonic, cardiac, or vascular sounds, can thus be judged of with perfect accuracy.

The following are some of the purposes to which the double stethoscope may be applied:—

The estimation of the comparative force, intensity, duration, loudness, and other acoustic characters of the inspiratory or expiratory sounds, in the supra or infraclavicular spaces, in cases of suspected phthisis in the now so-called *pretubercular* stage, and in which very slight departures from the normal condition of the respiratory sounds, in one or both of the lung apices, are the only phenomena to be expected.

I anticipate that the instrument will prove of great value in this class of observations in experienced hands.

In estimating the relative intensity of the respiratory sounds in both lungs, at any two corresponding parts of the chest, in cases in which deeply-seated tumours, cancerous, aneurismal, or of other nature, may be suspected to exist, and in which, by pressure on a bronchus, they produce inequalities of respiratory sounds in parts, or throughout the whole, of either or both lungs.

In comparing and estimating the characters of the aortic and cardiac sounds in suspected cases of valvular or aortic lesion, or in cases in which aneurismal dilatation or actual aneurism exists. The phenomena of two distinct pulsatile centres within the cavity of the chest, with, as it often occurs, sounds and impulses of very distinct character, can thus be most strikingly demonstrated.

Aneurism, or other pulsating tumours in the region of the neck, or axilla, in the cavity of the abdomen, or in the iliac or femoral regions, can likewise be submitted to careful acoustic analysis by the double stethoscope, and the intensity or other characters of these phenomena can be thus, with the utmost accuracy, contrasted with those of the heart or the aorta.

Many other applications of the double stethoscope will, doubtless, occur to the practical physician.[a]   A modification of the double-bell stethoscope, in which the bells are made of the form of an elongated ellipse, will be found useful in exploring the chest, when much emaciation exists.   A similar modification of the ordinary single-bell stethoscope has been effected at my instigation.   It will be found very convenient for the examination of phthisical patients, or others in whom there is much emaciation, as it adapts itself readily to the intercostal depressions.   The elliptical bell is also well adapted to the acoustic examination of arteries and veins.

[a] This instrument was first manufactured (1849) for me, under the superintendence of the late Mr. Kane, whose premature death, shortly afterwards, chemical science in Ireland has deeply to deplore.

# PART II.

# REVIEWS AND BIBLIOGRAPHICAL NOTICES.

*Sulle Malattie da Fermento Morbifico e Sul loro Trattamento.* Memoria del DR. GIOVANNI POLLI. Milano. 4to, pp. 60.

*On Diseases Depending on Morbific Fermentation, and their Treatment.* Memoir of DR. G. POLLI. Milan.

THE work before us is a most interesting monograph on zymotic diseases, strictly speaking; or, on such diseases as date their existence from the presence of a fermenting or catalytic principle, either generated spontaneously in the system, or introduced from without.

Among zymotic or catalytic diseases, are classed almost all the most fatal maladies to which the human frame is liable: cholera, typhus, puerperal fever, glanders, black vomit, dissecting wounds, marsh fevers, &c., &c. If the author's experiments can be relied on, and they seem to have been conducted with great sagacity and care, such diseases would be no longer fatal, they would be as amenable to treatment, as many other ailments of daily occurrence, and of which we take but little note; and the remedies which cure those fatal diseases, when developed, would, in addition, seem to be capable of acting as prophylactics against them.

If Dr. Polli's investigations are correct, and his results unquestionable, a new era opens out in the history of medicine; and as vaccine banished small-pox from the civilized portions of Europe, so would the adoption of his remedies, render an army safe from the devastation of typhus; a military hospital from the scourge of infectious gangrene; a lying-in establishment from the dreaded puerperal fever; and the public schools from the ravages of scarlatina. The subject is of such importance, that we shall abstain, as much as possible, from comment, and rather give to our readers in a condensed form, and, as far as we can, in the author's

own words, an account of his labours, his investigations, and his experiments.

Dr. Polli commences by establishing the great importance of fermentation in catalytic actions, he says :—

" By catalysis, fatty principles which are insoluble, are rendered soluble (glycerine, for instance) ; some bitter principles, as salicine, are rendered sweet (glucose) ; some inodorous substances, myrotic acid, for instance, are changed into odorous essences (oil of mustard) ; many neutral substances, as urea and allantoin, are changed into energetic alkalies (ammonia) ; some inert principles, or of weak nutrient capacity, as starch, are changed into inebriating substances (alcohol) ; and, finally, some principles of very slight action on the human economy, as amygdaline, are changed into energetic poisons (oil of bitter almonds and prussic acid)."

Further on he says :—

" Different putrescible organic substances will, therefore, be capable of producing divers *morbific ferments;* or, perhaps, even the one organic principle, during different stages of its decomposition, may be capable of producing the same varied effects ; and if, in a healthy animal, some such putrescible substance should be introduced, either by the lungs, the gastro-enteric tube, or by the cutis, or by injection, or by inoculation, such substance being in a state of decomposition, different from that which should correspond with a normal physiological metamorphosis, its introduction would give rise to serious disturbance in the composition of one or more of the fermentable components of the body ; in such cases the *morbific ferment* would be introduced from without.   But should the natural metamorphosis of the putrescible substances of our organism deviate from its normal course, either in consequence of atmospheric vicissitudes, great fatigues, insufficient exercise, mental anxieties, or in consequence of suppressed secretions or excretions, such deviations may give rise to compounds capable of effecting abnormal modifications in the putrescible components of our body, and in this case the *morbific ferment* would originate within the living frame.  .   .   .   .   The change which takes place in the human economy, in either of these cases, is simply due to a catalytic action ; I shall, therefore, for the sake of brevity, and also, at the same time to indicate their proximate causes, name all diseases arising in such manner *catalytic diseases.*  Catalytic diseases are truly diseases of blood poisoning, for it is in the blood that the morbific ferments are generated, or introduced.  .   .   .   .   I shall illustrate this operation by quoting some experiments of Schmidt (*Ann. di Chim. appl. alla Med.*, vol. xxiv., p. 59).   Blood, fresh drawn from the vein of a

healthy man, will not cause either sugar, urea, amygdaline, nor asparagine to ferment. If the same blood be left exposed to the air for a few days, a principle will develop itself in it, which will be capable of determining alcoholic fermentation in saccharine substances; and after fourteen days' exposure another principle, capable of causing both urea and asparagine to ferment, will be formed. Such blood, however, kept ever so long, will not become capable of inducing amygdaline to ferment.

" Blood drawn from the veins of persons labouring under various diseases, including cholera, induces fermentation in a few hours, not only in sugar and urea, but also in amygdaline.

" From these experiments I conclude, that the albuminoids of the blood, can, under certain conditions, undergo such change as to give origin to specific ferments, which do not exist in normal healthy blood; and that during certain diseases, it not only has a greater tendency to produce these ferments, but will even give rise to others, both different and more active, than such as would arise from the simple spontaneous alteration of normal blood.

" Experiments carefully practised on animals, have given the following important results :—

" 1st. That the injection of a certain quantity of pus into the circulation, produces pyemia, and such diseases as are characterised by multiple abscesses.

" 2nd. That the injection of putrid matter, produces septicemia, or those diseases recognised by the name of putrid infections, and which are characterised by typhoid gastro-enteritis.

" 3rd. That the injection of matter obtained from contagious diseases, glanders, for instance, will reproduce the same affections.

" The injection of from two to four grammes of corrupted human pus, into the veins of a dog of medium size, and weighing about six or seven kilogrammes, almost always induces vomiting, after a few moments, often followed by alvine dejections. The dog looks stupid and weary, and stretches itself on its side, its breathing gets hurried, it will neither eat nor drink, and thus it remains for two or three days. If the lesser quantity (viz., two grammes), of pus have been injected, then the dog, about the third day commences to improve; it will take a little food, will move itself a little, and altogether look more lively, and by the ninth or tenth day, it will be so much better, as to be considered quite convalescent; the wound also, through which the injection was practised, and which, at the commencement, had suppurated and spread itself, will now have begun to get small, and will show symptoms of cicatrization. If, however, the larger quantity (four grammes) shall have been injected, the dog will become daily worse, presenting all the symptoms, and running through all the stages, of typhoid fever; it will keep constantly lying down in its kennel, in a sort of stupor; it will take no food; it

often suffers from bloody stools; the wound through which the injection was practised becomes livid and gangrenous, and the dog dies between the fifth and seventh day after the operation. At the *post mortem* examination the gastro-enteric tube is found in a general state of inflammation, the mucous membrane of a dark red colour, here and there dotted with puriform exudation, at times mixed with ulcerations, especially in the neighbourhood of the pylorus, and in the cœcum; the lungs are found full of ecchymotic spots, and the blood contained in the larger vessels, and in the right cavities of the heart, is tarry and liquid.

" The injection of from one to three grammes of putrid blood, into the veins of a dog, produces a typhoid disease, very similar to that produced by the injection of pus, but of much more serious character. If the lesser quantity be injected, the dog rarely vomits, but remains stupid and motionless, standing on its four legs, hanging its head down, and will remain so, at times, for hours; eventually it lies down, and for several days it will neither eat nor drink, the wound, during this time, becoming large, livid, and sanious. By slow degrees, in the course of eight or ten days, the dog improves, but during its entire illness, its complete prostration of strength, together with its comatose state, fully recal to one's mind the characteristics of adynamic fevers.

" If, however, the larger quantity of putrid blood, viz., three grammes, have been injected, the dog both vomits and defecates, generally within a few minutes, and the successive conditions of stupidity, prostration and coma, are more strongly marked; the dog lies on his side, with his legs stretched out, as also his head and neck; the wound assumes a sanious and often a gangrenous appearance, and about the third, fourth, or fifth day after the injection, the dog dies. At the *post-mortem* examination the entire gastro-intestinal tract exhibits the appearance of a violent attack of gastro-enteritis, the mucous membrane of the stomach and the intestines being deeply injected, dark red, and in some spots ecchymotic and bloody, the most inflamed portions being the stomach, in the vicinity of the pylorus, the duodenum, and the rectum.

" The injection into the veins of a dog, of the discharge collected from the nares of a glandered horse, even where only the small quantity of *half a gramme* is used, gives rise to the following phenomena. Immediately after the operation the dog generally vomits, this is followed by utter prostration of strength, laboured respiration, distaste for food, rapid wasting away, the formation, here and there, under the skin and between the muscles, of numerous unhealthy (*marciosi, putrid*) abscesses, which, when laid open, exhibit a lardaceous base, analogous to syphilitic ulcers in the human body; after death numerous clots are found in the lungs, much more numerous and better marked than in the case where pus was injected. These are not merely ecchymotic stains, but real clots,

often softened in the centre, and even at times converted into purulent cavities.

"The summary conclusion of my experiments, of which I have now only given a slight sketch, is, therefore, that by means of injections into the blood, with the above mentioned morbific matters, very serious and well marked forms of disease can be produced, exhibiting all the general characters of catalytic diseases."

Once admitted, that catalytic diseases depend on the presence and action of specific ferments in the blood, the question then arises, whether it would be possible to neutralize them, and render them inactive, when once introduced or self-developed in the living body. Dr. Polli answers in the affirmative, notwithstanding the assertion of Claude Bernard (whom he calls the greatest living physiologist), who, after establishing the fact, that fermentation may arise in the blood, and give origin to poisonous principles, which may, in their turn, produce certain grave accidents in the living frame, adds:—" La neutralization des ferments *est impossible,* parce que pour cela, il faudrait changer les propriétés du sang à tel point, que la vie ne serait plus possible (Leçons sur les éffets des substances toxiques et medicamenteuses, p. 99)."

Dr. Polli believes that we possess in sulphurous acid, when combined with salifiable bases, a means of controlling and neutralizing morbid ferments in the blood of living animals, without, in any way, vitiating its qualities so as to render it incapable of maintaining life. After carefully studying the action of sulphurous acid, on organic matters, and fermenting principles, in particular, our author came to the conclusion, that not only it alone, but also its combinations with earths and alkalies, such as the sulphites of soda, postash, magnesia, and lime, possess, in a supreme degree, the power of arresting all known organic fermentations, and putrefactive metamorphoses of animal solids and liquids; and that its action does not depend on its decomposing the fermenting principle, but simply by modifying its molecular aggregation, so that it never acts as a poison on the living organism, as do many other substances, well known for their antiseptic properties, but which, on account of their poisonous effects, can not be employed with safety. He says:—

"I made several experiments with healthy dogs, for the purpose of determining the quantity of sulphites of soda, potash, magnesia, or lime, which could be safely administered, and I found that a dog weighing

from seven to eight kilogrammes, could not only take, with perfect safety, from one to fifteen grammes of such salts, but also without the slightest inconvenience ; and a dog of about the same weight, took during fifteen successive days, as much as ten grammes of these salts daily.  Sulphite of lime appears to be even better tolerated, as on one occasion I gave to a dog of about eight kilogrammes weight, as much as fifteen grammes of it at a dose, and it did not appear to suffer the least inconvenience.  I killed several healthy dogs during these experiments, for the purpose of examining the state of their stomach and intestines, and I constantly found them in a perfectly normal condition.

"Having thus determined the harmless action of these salts, I endeavoured to trace their course through the living organism, and determine, if possible, by what way, and in what condition they are eliminated from the system, and I found that they remain as sulphites much longer than might have been supposed, from their aptitude to become sulphates during the oxidizing process of life.  I found *sulphites* in the urine, for many hours after their ingestion, and not sooner than after a lapse of twenty-four hours did I find them in the urine as *sulphates*.  The following experiment will prove interesting ;—I took three dogs in good health, and of about the same weight and stature, to one I gave fifteen grammes of sulphite of soda, in the course of twenty-four hours, one gramme at a time, wrapped up in a pellet of sausage meat ; to another I gave fifteen grammes of sulphite of magnesia, in the same way ; and to the last I gave the same food, but no sulphites. The three dogs were put to death at the same time ; I collected the blood and the urine of each separately, together with the liver and one hind leg, without the skin ; I easily detected the presence of the sulphites, in every one of the fluids and solids of the dogs to whom they had been administered, while I failed in detecting even a trace of sulphurous acid in the remains of the third dog.  All these samples, liquid and solid, were then left exposed at a temperature varying from 12° to 15° centigrade, and after five days the urine of the third dog exhibited a highly ammoniacal odour, and its liver and leg gave evidence, by their smell, of impending decomposition, while those parts which had been taken from the dogs who had received the sulphites, still remained perfectly fresh."

These results confirmed my theoretic opinions, and I concluded, that if sulphites taken by the mouth, could so modify the tissues of a living animal, as to give them the power of resisting, for a longer period, the putrefactive fermentation after death, so might the presence of these same sulphites in the living tissues, enable them to resist, during life, the action of those morbific ferments which constitute the essence of catalytic disease."

The author's memoir concludes with the details of sixty-eight

experiments, made upon living dogs, which we do not think it necessary to transcribe, they were carried on evidently with great care; one half of the dogs experimented on, were left to the effects of the poisonous injections without any remedy being administered; the other half were treated with sulphites. The results were various, and that fact tends, in our minds, to increase the value of these experiments. Two dogs, weighing respectively nine and four kilogrammes, received each an injection of four grammes of normal pus, in their femoral vein. The largest of the two, during the three days preceding the operation, took eighteen grammes of sulphite of soda, and during the two days which followed it, ten grammes more. For ten days the dog continued in very tolerable health, it then began to refuse its food, became drowsy, and two days later it died, in consequence of hemorrhage from the wound. The *post-mortem* revealed a state of enteritis, and melena of the rectum. The lesser dog got no sulphites, nor any other treatment, it became ill, but after a few days began to mend, and on the tenth day might be considered cured. This same dog, after having perfectly recovered, was treated to a fresh injection, but this time instead of healthy laudable pus, as in the last experiment, was injected with some putrid pus, long kept. The wretched animal died in three days, and at the *post-mortem* there was found inflammation of the lungs, with scattered pulmonary apoplexy, and gangrene of the wound in the thigh. Several dogs were prepared with different quantities of sulphites, for several days previous to being injected with putrid pus; the result was, that those which had received the smaller doses of sulphites died, while those who had been liberally supplied with them recovered, and the rule seemed to be pretty constant, that the more pus was injected, the greater quantity of sulphite was required to antagonize it. Several dogs were injected with putrid blood, they all, with one exception, died. Other dogs prepared with sulphites and then injected with the same blood, all recovered, as well as some dogs, who were injected with putrid blood, diluted with twice its bulk of solution of bisulphite of soda. A number of dogs were similarly treated, with the discharge collected from a glandered horse, and the result was the same.

We have read this memoir with great interest, the reasoning is plausible, the experiments crucial, the results most satisfactory; and averse as we most sincerely are to all kinds of torture, and though we strongly set our face against vivisections, yet, in this case, we cannot refrain from expressing a wish that these ex-

periments, and analogous ones, may be soon carefully repeated
in order to test their real value. Not many months ago, we
had to deplore the loss of a highly promising young man, resident
pupil in one of our largest hospitals, who died from diffuse
inflammation, from a puncture received in the discharge of his
duties. If Dr. Polli's experiments can be relied on, we had a
remedy at hand, which could have saved that young man's life.
Another practical use, to which we would be glad to see these
sulphites put, is the preparation of subjects for dissection. Very
rarely does the diligent pupil and assiduous dissector, go through
his term of study, without suffering, in some shape, from the
constant inhalation of the products of decomposition. In fever
wards the night chairs might always have a certain quantity of a
solution of a cheap sulphite in them; vast suppurating surfaces and
cancerous wounds might be dressed with the same, in short, the uses
of these substances, when once proved to be efficacious, would be
as universal as they would be valuable. In conclusion we would
say, that if the author has not deceived himself in his experiments,
nor over-rated the value of these substances, but has really dis-
covered in the sulphites, a remedy for catalytic diseases, and a
prophylactic against them, he has conferred a boon as great, or
perhaps even greater, than did Jenner by his great discovery of
vaccination.

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*On Uncontrollable Drunkenness, relative to Medico-legal Arrange-*
    *ments.* Read before the Social Science Congress, 1861. By
    THOMAS LEWIS MACKESY, M.D.

*On Chronic Alcoholic Intoxication, or Alcoholic Stimulants, in*
    *connexion with the Nervous System.* By W. MARCET, M.D.,
    F.R.S., Fellow of the Royal College of Physicians, &c. London.
    1860.

*Some Facts which suggest the idea that the desire for Alcoholic*
    *Stimulants is not only transmitted by Hereditary Descent, but that*
    *it is also felt with increasing force from generation to generation,*
    *and thus strongly tends to deteriorate the Human Race.* A Paper

read before the Dublin Statistical Society, on the 15th of February, 1858. By JAMES HAUGHTON.

*The City—its Sins and Sorrows, &c.* By THOMAS GUTHRIE, D.D., Edinburgh. 1857.

*Reformatories for Drunkards.*—Beyond all controversy it is necessary that something should be done, if not to control and destroy, at least to prevent many of the evil results of drunkenness. We may be met by the assertion that this vice is not so frequent or so general as it was a century ago. Grant it for the moment; yet nothing is better established than the fact that thousands are every day rushing on to destruction, and involving the innocent and helpless in most of the consequences of their lamentable propensity.

Regarding this, our national sin, Divines have preached; the Legislature has enacted laws; Sanitary Philosophers and Physicians have written, taught, and practised; Temperance Societies have laid down rules and administered pledges; Orators have thundered; Parents have whispered, commanded, prayed; with what result? very little indeed, if we regard the many and mighty agencies in operation against it. Like other things in the world, most of these agencies have failed, because along with truth they have inculcated some fallacy.

The Divine denounces the continuous habit of inebriation as a sin (which, in the first instance, it undoubtedly was in every case), but he fails in the means he recommends for its cure—the forsaking of it.

The Legislature enacts, that no crime is excusable because committed by the man when in a state of intoxication, but rather the reverse; it punishes the drunkard in various ways, but the gaol never teaches him to forsake his sin.

The Sanitary Philosopher comes very near the mark; he investigates the many causes of this vice; he finds that some have an undoubted *hereditary* tendency to it; some are driven to the tavern by the want of comfort at home;[a] a poor man because his home is cold and dreary, his wife thriftless, his children are domestic nuisances, his meals insufficient and badly prepared, because he has no recreation there, nothing but dull misery always before him; one of the "better class," as we term it, treads the same path to

[a] See Mr. Nugent Robinson's Essay "On the Condition of the Dwellings of the Poor in Dublin, &c.," read at the Social Science Congress, 1861.

ruin because his parents never think of youthful tastes and pursuits, never try to make his home comfortable and a more desirable place to him than any other; or, perhaps, if a married man, because his wife is a worthless idle woman, reads novels, lives in the clouds, is ever complaining, but never realizes the world we all live in.

Again, this Sanitary Philosopher finds that the want of education and public institutes for rational recreation and refreshment, is a fruitful source of drunkenness, the tavern supplying all these defects; that the wofully bad education of most classes of women is another cause, whether this be taken to mean education in the ordinary meaning of the term or simply in housekeeping. The very knowledge of these causes supplies suggestions as to their remedy; yet he fails, because these can only be carried out by public authority, whether in the form of legal enactment or by the pressure of public opinion.

Further, the Physician has taught, written, and practised on this subject. He may write and the public may read; he may strongly recommend while the patient secretly evades his recommendations. He may treat cases of confirmed drunkards as those of bodily disease, of mental, of both, of neither, of hereditary tendency, of irresponsible agency, all with some measure of success; yet he cannot enforce his advice or practice, and therefore, as we well know, many of his patients relapse, and their end is worse than their beginning.

Temperance Societies have laid down rules and administered pledges; the good thus done is incalculable; they are right in inducing men to give up sinful indulgence, but they err in enforcing total and ascetic abstinence as the means to that end; they err in describing alcoholic agents as poisons, as things which, under any circumstances, or in the smallest degree, are injurious to health; they err, in fact, in describing the moderate use of any of God's gifts as sinful. An able writer says—" It is much more easy to get the drunkard to abstain than to be sober. . . . Indeed this is so notoriously the case, that *all* persons (however moderate their morals), who have set themselves seriously to reform their characters from habits of vice long indulged, are obliged (at least at first), as a matter of prudence, to practise some degree of asceticism; to deny themselves certain lawful enjoyments in some circumstances, lest old associations should draw them back into what is unlawful. Men of discretion practise such exercises, not because they deem the things forborne unlawful in others, but unsafe to themselves;

in the same way that the diet of a person in full health is unsuitable to the convalescent. But it is much more flattering to a man's vanity (and therefore more agreeable to most persons), to believe that the austerities, which his own previous vice and present frailty render necessary, are themselves the highest and most perfect virtue; that living in an hospital is the best indication of health."[a]

Temperance Societies err also, in affirming that abstinence (for it is not *temperance* they want) constitutes a *cure* for drunkenness; as well may one who has long imbibed some poisonous agent expect that sudden abstinence from it will cure him. By no means; other remedies, both medical and dietetic, must be adopted for this purpose.

Against this vice Orators and Oratresses have thundered; with what effect? The great majority, like most people who hear good sermons, consider the speeches very fine, the arguments very cogent, the examples very horrible; but there the matter ends; no practice comes from all the talk, and here, as in everything else, " man thinks all men mortal but himself." Moreover, parents have whispered words of caution to the erring son, they have commanded him to abstain, have threatened, have punished, and, as a last resource, have prayed the wayward child, by his love for them, by his fear of disgrace, by his danger of losing reputation, by all his hopes for this world and for the next, to give up the cursed indulgence They have sent him to the world's end, he has come back unchanged; they have spent all their substance upon him, but their every effort, every power, every prayer, has been in vain.

Now seeing that all these agencies have, to a lamentable extent, failed to crush drunkenness, and so failed to prevent untold miseries to the families of thousands, we hold that the time has come for some institution or asylum to be erected, by authority of the legislature, for the reception and treatment of confirmed drunkards. Let it be called a lunatic asylum, for many drunkards are really lunatics, as we shall presently show; or, if that name be objectionable, let the modern and more fashionable word " Reformatory" be adopted. The principle for which we contend is, that drunkards who are injurious to the lives and properties of themselves or others should be placed under forcible restraint, and there kept until, by medical and moral treatment, they are cured.

[a] Introduction to a Selection from Aristotle's Ethics. By Bishop Fitzgerald (Killaloe).

The principle of a reformatory will be found to contain, for this purpose, every excellency of the agencies already referred to, and to be free from their defects. If the drunkard be a responsible agent who drinks when he could keep sober, it restrains him; if he be physically diseased or poisoned by long indulgence in the habit, so that he *must* drink to attain any degree of comfort, it restrains him, while it gives antidotes to the poison, treats his body for a disease, and endeavours to restore him to that soundness of health in which we will have no desire to indulge in this more than in any other kind of sin. If he be morally insane, that is to say, reduced to such a state of mind that, contrary to his judgment, he feels compelled to drink, it restrains him as a gaol can, but also treats him as being something else than a criminal, which a gaol cannot. It will be found, in fact, to embrace the functions of the Divine, the Legislator, the Physician, the Total Abstinence Society, the Temperance Orator, and all the other means usually resorted to for the attainment of the same end. But these are such as relate only to the individual. Look what advantages to society such an institution would secure; property saved from destruction, the hopes and prospects of families preserved from desolation, wives rescued from poverty, husbands from shame, children from beggary and disgrace, with many others too numerous to mention, but readily called to mind.

This is one of the questions of the day. In the Social Science Congress papers are annually read advocating some such measure; and if the writers differ as to detail this does not weaken the case, but shows strongly what must be admitted to be the evident disease, and the general agreement as to the principle of its treatment.

But the question will be asked—" What classes of drunkards will you commit to such Reformatories?" Cases of delirium tremens (from drinking) should not be so committed, because they fall within the ordinary province of the physician, and are recoverable by medical treatment. A second class is that of persons who, not habitually but occasionally, get drunk at festive meetings, public dinners, and the like. Now a man in such case is directly amenable to the laws of God, of the land, and of good society; he is perfectly responsible for his act, he cannot plead the force of habit, and even though he should, from any given excess, get a fit of that temporary mental derangement called delirium tremens, yet he, and all like him, should be excluded from the proposed reformatory.

With regard to the many who daily consume large quantities of alcoholic drinks, without any ill consequences save to their own health, not even becoming intoxicated, though often taking much more than those who become so, it is plain that no legislative interference is required. Of course such conduct lays the foundation of many diseases, and transmits them to posterity; but in this case the law cannot control or rule the man. Let any one read Carpenter's well-known *Physiology of Temperance and Total Abstinence*, and count by number the diseases induced by alcoholic excess. The medical man will there see catalogued many of the ills the flesh is heir to; indeed it may be truly asserted that by far the greater number of diseases are the fruits of intemperance, of our own unbridled passions, or of the sins of our fathers.[a]

Here we are reminded of one large class of drunkards, those who *inherit* a decided craving for spirituous liquors. Mr. James Haughton, in a paper read before the Dublin Statistical Society, (February 15, 1858), argues, that not only is such desire transmitted by hereditary descent, " but that it is felt with increasing force from generation to generation, and thus strongly tends to deteriorate the human race." In this paper he quotes, as an authority, Macnish, in his *Anatomy of Drunkenness;* also Darwin, beside Mons. Morel's *Physical, Intellectual, and Moral Degeneration of the Human Race;* Dr. Whitehead, *On the Transmission from Parent to Offspring of Forms of Disease, and of Morbid Taints and Tendencies;* and *The Races of Man, a Fragment,* by Robert Knox, M.D. The causes which contribute to this deterioration are too numerous to mention here. The mode of argument adopted is, that taking those countries where spirituous liquors are most consumed, we find the people most physically and mentally degenerate. He gives the following extract from Mons. Morel as a summary of the argument:—" We have no need of further proof, to demonstrate the fact that the use of toxic inebriating substances gives rise in the race, to the same pernicious effects as result to the individual. They have invariably the same character in all latitudes. . . . New maladies are generated, and old ones take on increased fatality; the mean duration of life is lessened; the viability of new-born children is gradually less and less to be depended on; and disturbance of the moral and intellectual nature becomes at length signalized by the highest rates of insanity, of suicide, and crime."

Should those, commonly termed insane drunkards, be committed

[a] See Watson's Lectures, &c., Vol. i., p. 15, 4th Edition.

to these reformatories? We think not, because their case is fully provided for in the existing lunatic asylums of the country; in fact, if such persons were taken from the asylum and placed in the reformatory, there would be no great occasion for the former. Dr. Carpenter shows that a very large proportion, more than 25 per cent., of the inmates of lunatic asylums were drunkards, to say nothing of those whose lunacy is one of those "deteriorations" resulting from having had drunken ancestors. Mr. Haughton quotes from a cotemporary with reference to this—" Dr. Whitehead places intemperate habits first among the causes of insanity in this country, and observes in respect to them—Dr. Cox remarks 'that nothing is more common than to see the offspring of an intemperate man become demented.' Dr. Adams also expresses a similar opinion. I shall, therefore, says the author, offer only one remark on this subject, viz.:—' that women who are habitual drunkards, generally produce immature or idiot children.' Lord Shaftesbury says— ' From my own experience as a Commissioner of Lunacy for the last 20 years, and as Chairman of the Commission during 16 years, fortified by inquiries in America, I find that fully six-tenths of all the cases of insanity to be found in these realms, and in America, arise from no other cause than habits of intemperance.' Dr. Corsellis says—' One-third of the cases in the Wakefield Lunatic Asylum may be referred to intemperance.' Dr. Whitehead says— ' In an asylum at Liverpool 257 out of 495 patients became insane through intemperance.' "

Now if we remove from the case those classes already described, we yet have others so numerous as to require interference. The confirmed drunkard should be committed, whether he have the power of self-restraint or not. If in the former predicament, he can undoubtedly mend; if in the latter, a great deal may be done for him which could not possibly be done were he at large.

Every one must admit that the subject of " Chronic Alcoholism" is a fair case for a reformatory. Mr. Haughton in the pamphlet already referred to, quotes the following:—" We have made, as it will be seen, two distinct classes of persons degenerated in consequence of alcoholic excesses. One class arrives at length, by a series of well marked nervous lesions, physical and intellectual, at general paralysis. The other, although profoundly affected as regards innervation, remains stationary at a point, leading a miserable existence, characterized physically by a special condition of cachexia and marasmus, morally by a manifestation of the worst tendencies

and of the lowest brutishness." Of the first of these classes (paralyzed drunkards) it may be said that they are comparatively harmless; but at what cost to themselves and to their families have they at last arrived at this melancholy state? The tendency of drinking to this end cannot be too generally known.

The late Dr. Todd, one of the first physiologists of his day, says, with reference to the causes of paralysis—"Whatever interferes materially with the conducting power of nerve fibre, or the generating power of nerve vesicles (gray matter), will constitute a paralysing lesion. Thus, in the first place, poisoning of the nervous matter will act in this way.[a] Professor Miller observes—"The brain, and the nervous system in general, we have seen to be the parts chiefly acted on in the physiological working of alcohol.[b] These cases are more fit for an hospital than for a reformatory, but not so with the second named class, those affected with the disease commonly known as "Chronic Alcoholism." Magnus Huss of Sweden, has lately written a treatise on this subject, but perhaps a more accessible volume is that on *Chronic Alcoholic Intoxication*, by Dr. Marcet, of London, 1860. He says—"The symptoms of the disease depend on a functional disturbance of the properties of the nervous system, which may last for weeks, months, or years, even after the habit of excessive drinking has been given up."[c] He then details the cases treated by him with oxide of zinc, and at the end gives a tabular statement of all particulars. These may be given shortly as follows:—of 48 cases treated, 24 were cured, 15 ceased attending, having been relieved or otherwise improved, seven attended only a few times (some once, some twice), one became an intern patient in the Westminster Hospital, and one is reported as *cured*, but continues drinking, and has applied again.

We affirm then, that cases such as these are fit subjects for committal to the proposed reformatory. That this "Chronic Alcoholism" is really a bodily disease, and so capable of medical treatment, we see from the fact that 24 out of the 48 cases were so cured of it. Further, 15 ceased attending, having improved or been relieved. Now if these had been in an institution from which they could not have escaped, they would, in all probability, have been added to the 24 cures. Seven attended only a few times; this only shows that treatment uncombined, with moral and physical restraint,

[a] Clinical Lectures. 2nd Edition. 1861. p. 609.
[b] Alcohol, its Place and Power, p. 74.
[c] P. 6. Op. Cit.

is hopeless; and the last item, one reported " cured, but continues drinking," takes in the whole principle of the proposed reformatory; for in such an institution he should not be discharged immediately on cure; he should undergo some probation, or get free only conditionally.

The last class of confirmed drunkards which we shall consider, are those afflicted with *dipsomania*, or, as it has been more properly termed, *oinomania*. These are persons who should be admitted to our present lunatic asylums, for the best of reasons, *because they are lunatics*. But even by many who deny their lunacy it will be admitted, that some restraint, in a reformatory for instance, is desirable, although there are those who deem even this suggestion an attempt to interfere with the liberty of the subject.

A few words will suffice to describe the oinomaniac:—He feels an irresistable propensity to swallow stimulating drink of any kind, whenever and wherever he can get it (we have known several instances where persons having access to drugs of which the conveying media were wine, brandy, or spirits, used every means to take the most nauseous drinks, simply for the stimulating properties of them); he dislikes society, and drinks, if possible, in secret; nor can it be said that he drinks for drinking's sake; it is to free himself from the fearful misery occasioned by the non-gratification of this impulse; he knows he does wrong, and bitterly regrets it, but has not the slightest control over the will; he is regardless of health, life, property, and every other consideration; will sacrifice the dearest interests of his best friends, and in some cases display a propensity to commit suicide or homicide. A more full description of this malady may be found in Dr. Carpenter's well-known book already referred to. He quotes at length from Dr. Hutcheson, of Glasgow, to show that it appears in *three* forms: the *acute*, arising in the course of certain diseases, and disappearing with their cure; the *periodic*, or *recurring paroxysmal form*, arising mainly from intemperance, sometimes from hereditary transmission, and occasionally from certain diseases—its principal feature being, that between the attacks the subject becomes quite well, and apparently cured; and, lastly, the most common or *chronic* form, wherein the whole life becomes one constant scene of miserable degradation. That a wretch of this kind is a lunatic we assert.

In the eye of the law a lunatic is one who knows not right from wrong, and who is therefore an irresponsible person. The main character of insanity, in a legal point of view, is the existence of

delusion,[a] and hence the law hesitates to recognise any insanity but that of the *intellectual* powers. "There may, however,[b] be no primary disorder of the intellectual faculties, and the insanity may essentially consist in a tendency to disordered emotion—as excitement, which affects the course of thought, and consequently of action, without disordering the reasoning processes in any other way than by supplying wrong materials for them. This is now termed ' MORAL INSANITY ;' and in it the subject is moved by a powerful impulse, amounting to necessity, volition being at the same time in complete abeyance, and he perfectly aware that he both does wrong and is amenable to punishment." Another authority says[c]—" There is much latent, undetected, unrecognised insanity in real life, bringing with it a long train of deep and incurable miseries. It assumes many aspects; occasionally it exhibits itself in the form of intemperance, an uncontrollable propensity for stimulants, clearly having a mental origin, in extreme eccentricity, and in acts of a morbidly-impulsive character." Dr. Forbes Winslow thinks that Moral Insanity is mostly accompanied by disease of the intellect. Herein he is probably correct; and although the law may *hesitate* to admit such a disease to be insanity, it does not always so act; indeed our law-making should advance in this respect with the psychological science of the age.

At the Social Science Congress, held in Glasgow in September, 1860, Mr. A Kirkwood read a paper *On the Propriety of Placing Habitual Drunkards under Restraint, with a view to their Reformation.* The scheme he proposed was, that lunacy should be declared to include habitual drunkenness; that separate asylums for the reception of such persons should be licensed by the sheriff; that the sheriff should have the power to send drunkards to these asylums, either upon the application of relatives, or upon the certificate of two medical men; that the sheriff should have the power of detaining them six months, or as much longer, up to the period of two years, as might be necessary.

At the same Congress Dr. Peddie, of Edinburgh, read a paper recommending the treatment of dipsomania. " Sheriff Barclay (we quote from a newspaper report) agreed with Dr. Peddie that dipsomania is insanity, and gave several cases of it—as, for instance, a woman who was very clever at sewing, but had a drunken mania

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[a] Taylor's Medical Jurisprudence, p. 772. 4th Edition.
[b] Carpenter's Principles of Human Physiology, p. 837. 4th Edition.
[c] Dr. Forbes Winslow's Lettsomian Lectures on Insanity. London, 1854. p. 38.

for breaking windows; another man he (the sheriff) had sent ten times to gaol for stealing spades, and was certainly the 'knave of spades;' another man stole six tubs—and this was certainly a 'tale of tubs.' He thought the plea of the liberty of the subject was a false and unsound argument against confining dipsomaniacs."

The Rev. Dr. Guthrie says,[a] "The law should regard every man or woman who can be proved, before a jury or any other proper authority, to be, by habit and repute, a drunkard, a lunatic, and deal with them accordingly. The prospect of a shaven head, a strait jacket (if needful), the high walls of an asylum, and the society of the insane, would strike men with salutary terror. Months of sobriety would, in many instances, so restore the brain and body to health, that the person would acquire the power of resisting temptation, and come out to drink no more; the slave would acquire freedom in the house of bondage."

Foremost, among the Scottish medical men who have written and lectured on this subject, stands Dr. Christison, of Edinburgh. His lecture on some of the medico-legal relations of the habit of intemperance, delivered in 1858, is well worthy of public attention—particularly as we are told that to the opinions advocated therein he still adheres. He says:—"There is, fortunately, no difficulty in pointing out the kind of restraint which is required. In Scotland medical men have already established a system of treatment which is applied to those who consent to submit to it, and which seems to answer every purpose well; so that all the legislation wanted, is to render compulsory, at the instance of the nearest relative, what is at present only voluntary. This system consists of seclusion in some country district, where intoxicating liquors cannot easily be had; and where, under charge of a man of education, liberty is no further restricted than that each inmate must be at home at meal times, and at a fixed hour for the night, and that he must submit to all measures necessary for preventing the surreptitious use of stimulating liquors."

At the Social Science Congress, held in Dublin in August, 1861, a paper on uncontrollable drunkenness was read by Dr. Mackesy, of Waterford. The argument pursued throughout is, that by a defect in our laws the confirmed drunkard is regarded as a sane person; whereas such is not the fact; and, because it is not the fact, that legislative enactments should be made to secure the restraint of such characters.

[a] The City, it Sins and Sorrows, p. 140.

From the preceding statements we conceive we have established the psychological fact, that *Moral* Insanity is quite as irresponsible as *Intellectual*. We see in the case of the oinomaniac the prominent features of lunacy. From the description of the disease already given, it will be remembered that the subject of it loses control over his conduct, and cannot hinder his doing what he knows to be wrong; that he is propelled by an irresistible impulse to gratify his propensity, and sometimes even to destroy his own life, or that of others; that he cares not for his family, his property, or any obstacle to the gratification of his one desire, but readily sacrifices all. Thus he answers the description of the lunatics who are confined, to prevent injury to life and property of themselves or others; and however responsible for the course of conduct which may have brought the disease on him, all responsibility must be certainly held to cease when under its influence. But if the malady has been induced by hereditary transmission, or caused by some other disease, it is manifest that he is not responsible, directly or indirectly. Thus, on children are visited the sins of their fathers. If, then, lunatics should be placed in asylums, which we all admit; or, which is equally to the purpose, if they should be placed under forced restraint, and if oinomaniacs be in truth lunatics, it follows that they also should be so treated.

We need not pause to consider the good results to all concerned—the wholesome terror likely to be struck into incipient drunkards; but we would earnestly urge that in no other way can a cure be effected. Dr. Hutcheson, of Glasgow, never heard of more than two permanent cures; and Professor Stokes, of our own city, stated in a lecture,[a] that he never knew of one.

The proposed committal, however, is not hopeless. A friend communicated to us the following case:—" A young man, well educated, became such an incorrigible drunkard that his health declined, and he was also mentally and morally unfit for any business or profession. His moral sense was so entirely extinguished that he immediately disposed of his clothes, newly bought, retaining only rags to cover his nakedness; and he would steal any article within his reach; being all the while entitled to a good property, which a kind guardian dared not surrender to his keeping. Emigration was tried, but in vain; for, after squandering a sum given him as a kind of venture, he was extricated from an American workhouse, which he had entered as a pauper. As he persisted in the

[a] At the Meath Hospital, in 1854.

same misconduct on his return to Europe, his guardian, seeing but one hope of saving him—that is to treat him as *non compos mentis*—stated the facts to a magistrate, with a view to his committal to a lunatic asylum. That gentleman said, 'I accept your evidence of the melancholy facts, and, considering this the worst form of mania, I sign the order of committal with a safe conscience.' The governor of a district asylum, fully aware of the facts of the case, admitted the patient. In a few months he was discharged in renovated health; and so salutary has been the effect of the conviction that there was a power to treat him in this way, that the young man has never disgraced himself since, in a period of three years." Our correspondent adds—" Names are withheld for obvious reasons; but I pledge myself to the truth of the foregoing statement."

Here we see committal and treatment cured the man; while the salutary terror of being so treated, should he again fall into the sad habit, powerfully deterred him from entering even, on what we may here term " the first avenues of ill."

But institutions, in some respects resembling those now proposed, already exist. In Scotland they may be found—for instance, in Skye. Dr. Christison gives an account of his visit to an asylum for inebriates in that island. Here, we are told, the same failing existed, and few permanent recoveries were made, from the want of controlling power over the inmates, who soon tired of their discipline and went away; indeed they became patients, in the first place, only at the request of their friends, so that nothing better as a result could have been expected.

In the United States of America reformatories, or asylums for drunkards, are rapidly becoming national institutions; but, being only voluntary, they sadly want the principle of legal restraint. In one, called the New York State Inebriate Asylum, *The London Weekly Record of the Temperance Movement*[a] tells us, that *three thousand* inebriates have applied for admission; and among the number are said to be 30 clergymen. In the *Journal of the American Temperance Union*[b] we find a detailed account of this same institution. The following is an extract from the report:—" Up to the present date[c] 3,132 applications have been made to enter the asylum, many of which are from the patients themselves. These applications have come from every state in the Union, and from the Canadas. Of the number who have applied for admission during the past

year, nine have committed suicide while labouring under mania *a potu*."

In Holland, confirmed drunkards are put under legal restraint; and if, after fair trial, they prove irreclaimable, they are confined for life, and are considered dead in law. Dr. Mackesy, in his paper already referred to, concluded with propositions embodying his views as to the mode of instituting and conducting these establishments. We commend them to every one who would consider the subject fairly; but we would especially note propositions 9 and 10. Proposition 9 is as follows:—" When a patient shall be sent to one of these establishments *without his consent*, there should be a certificate from two medical men, with a declaration of the nearest relative, stating the history of the case, which should be submitted to the magistrates at Petty Sessions, who should be empowered to inquire into the circumstances privately, if the majority deem it expedient, and the patient can only be admitted on the order of the magistrates in Petty Sessions assembled, unless in cases of great urgency and violence, when a case may be admitted on the order of one magistrate, provided the violence and urgency of the case is medically certified; but such cases should be returned to the next Petty Sessions of the district, when the committal must be confirmed, and a Petty Session order obtained." This is fair to the patient, fair to the family, and fair to the magistrate, who might incur a heavy responsibility by making an unjustifiable committal.

Proposition 10 is that " in all such cases there should be an appeal to the assistant barrister at Quarter Sessions. This should be allowed in all cases of lunacy and dipsomania, to save the enormous expense of litigation that frequently occurs."

Dr. Guthrie suggests committal by verdict of a jury. Now, provided that the equitable Scottish system of *a majority* of jurors be adopted, and that one of three verdicts be given, no person could reasonably object to such a course; for it may justly be objected to that relic of barbarism, trial by unanimous jury, that this is such a question as a number of men could not at all times be expected to be unanimous about; and where a unanimous verdict happened to be given, the less decided in opinion might sometimes be presumed to have given way to the judgment of the rest. Moreover, an innocent person could be acquitted without stain on his character; whereas the cautious " not proven " would prevent him who escaped, through lack of evidence, from being confounded with the " not

guilty" person, as in England and Ireland, but might possibly induce him, if at all responsible, to consider his ways and be wise.[a]

It has been objected to legislating in any way for the restraint of confirmed drunkards—*that law would prove insufficient to determine a standard of what is drunken insanity.* This is only using the invalid argument "a particulari ad universale;" for even though occasional error may occur in fixing the standard, yet, as the power of appeal would always exist, no great or permanent grievance could be complained of; besides, any argument of this kind applies equally to all committal for lunacy; and no person will contend that because there have been, and may be, errors of judgment among magistrates, physicians, and others, or even gross abuses of the power lodged in these parties, therefore the doors of all lunatic asylums should be thrown open, and all the mad men and women let go free about the country.

It has also been objected *that such a law would press unequally*, that the poor man would suffer, while the rich drunkard who might debase himself at home, would practically be exempt. This we deny; indeed the unequal pressure, if any, would be the other way, for the rich man could do more mischief to his family and his property than the poor man; and this objection also applies to laws against vices of every kind.

It is said *that it would violate the just rights of man.* A man may perform an act in private which is a sin, but the same act in public becomes a crime. Formerly every village had its resident idiot or madman, who was hunted into frenzy by the inhabitants, and exposed by his relatives to make money by his misery; formerly a woman could expose her child in small-pox, to gain the alms of passers by; now neither of these exhibitions is permitted, and though the prevention of them was doubtless an infringement of that grand liberty of the subject, the right to do as he pleases, yet we all acknowledge its justice, yea, we *demand* that it should be so.

Further, it has been objected *that it would cause more misery than it would put down.* Some may perhaps feel it a disgrace to have

[a] In the army confirmed drunkards might be advantageously treated as diseased persons. If the drunken soldier, instead of being repeatedly punished, and his many repetitions of intoxication inserted in the Defaulter's Book, to be finally made the basis for a trial by Court Martial—if, instead of being so treated, he was sent into hospital, the best results would follow. At first the hospital might be filled, and the cells more empty than usual, but ultimately the occasion for both would materially diminish.

their relatives thus dealt with; but no sympathy can be extended towards such as deem the disgraceful term "drunkard" an epithet for pardonable or charitable construction. The injury likely to arise from unjust committal has already been provided against, and as to depriving an artizan's family of the means of living, by imprisoning the artizan himself, we would ask, what means does he provide them with while drinking?

It has been alleged that such an institution as that proposed *is illegal in principle*, as drunkenness is not a crime unless it disturbs the public peace; and further, that it should not be a crime any more than gluttony, which is equally condemned by the law of God. To this we reply, that if it be not a crime by law it ought to be made one as soon as possible, and that for the very reason why gluttony should *not*, because of the miserable consequences to morals and society entailed by the one, as distinguished from the other, which, although a sin, yet, even in this life, brings a chain of fierce diseases as the fair and legitimate consequence of such rebellion against the constitution and course of nature.

Moreover, it has been objected that the whole scheme is *impracticable from the want of evidence*, that relatives or acquaintances would scarcely ever inform against the delinquent or lunatic. This is an untenable objection, for the same applies to ordinary lunatics, and we know that it is highly practicable (and practised too) in such cases. Lastly, it has been objected that it would be *almost impossible to find when the patient was cured*. Without any experience of the good results of such reformatories, we may admit this in part; but one direct result of their establishment would be, increased knowledge of the disease and its cure, derived from observation and experience; besides, the adoption of the ticket of leave system would not fail to keep up a salutary, moral, and physical discipline on those who might be discharged on probation.

As we have before remarked, the mode of treatment to be pursued in these reformatories should combine the excellencies of various agencies already at work, ministration to the mind diseased, to the body diseased, and to the sinful and reprobate soul, as well as all preventive and recreative measures to save them from that great evil—being led into temptation. The description of these means might fill a large volume; any one of them, particularly the medical part, would form a professional treatise of considerable importance.

And here might we say a word to those who wholly repudiate

our position of drunken insanity, who assert that drunkenness is a crime, not a disease, and not to be classed with insanity or epilepsy. Be it so; but are not these very diseases some of the results of drinking? do we not every day see that the sins of fathers are, in this life, visited on their children? that men have become mad (using the term in its popular sense) by the thousand, from this very cause? and shall we not believe that drunkards who, with their eyes open, deliberately continue in the besetting sin, may, ultimately deprive themselves of the power of reformation, are irresponsible when morally insane, but undoubtedly responsible for becoming so?

Dr. Mackesy suggests that these reformatories be made self-supporting, so as to avoid their being an expense to the nation. We object to this, because then only those who could pay would derive any benefit from them; the large class that could not, and that which would not, would thus be practically excluded. They should be supported by the nation, and should be for all. Even were it a question of expense, that is easily answered. We read in Dr. Guthrie's work, *The City, its Sins and Sorrows*, that drunkenness is the cause of most crimes;[a] that it causes the annual loss of 60,000 lives in our population; and that £60,000,000 are spent annually in the United Kingdom on intoxicating liquors. Dr. Carpenter shows drunkenness to be the cause of many diseases.

Now, if most crimes be got rid of, much legal expense is thereby saved to the nation. If 60,000 lives be annually lost, the national wealth suffers. If many millions annually be spent on drink, how much of that could be saved by seriously diminishing this source of expenditure. If many diseases be produced by it, what a saving would its diminution be to families and Poor Law Unions; and if its widest and most general result, poverty, be diminished, what a national saving in poor rates to us all.

Our able statesman, Lord Palmerston, has urged on the working classes the education of their children, and the keeping of social homes, as powerful antidotes to the public-house and the prison; this is well, and saves the public much expense in the long run; but how much greater would be the expense saved to the country by the establishment of reformatories for drunkards, is evident from the data to which we have already referred.

When we express our view, that Total Abstinence Societies are not well calculated to overcome this great evil, we do not mean to discourage these useful institutions; by no means; we only say that

[a] P. 124.

they are not capable of *general* adaptation. We have known able clergymen who never advocated the extreme views that alcohol in any degree is poisonous, that any partaking of it is sinful, and the like, yet become, Total Abstainers, because, when they urged the giving up of the sin on a poor man, they were immediately met by the reply—" It is all very well for you who have plenty, and can drink your wine quietly at home; why do *you* not give it up?" Thus they have given up the use of alcohol (which, so far from being at all times poisonous, is, in certain states of the system, FOOD, and the only FOOD capable of assimilation),[a] on the principle of St. Paul, who would neither eat meat nor drink wine while the world lasted if it made his weak brother to offend. Reformatories for young criminals are the heralds of a change in our criminal jurisprudence from the old system of an eye for an eye, to the christian one of love to our neighbour. Let us hope that reformatories for drunkards will inaugurate a new era in our national law-giving, and so keep pace with the rapid progress of Psychological Science.

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*Placenta Previa; its History and Treatment.* By WILLIAM READ, M.D., &c., &c. Philadelphia: J. B. Lippincott and Co. 1861. 8vo, pp. 340.

THIS publication appears as the twenty-third volume of the Library of Practical Medicine, in connexion with the Massachusetts Medical Society—one, apparently, of a series of such works produced for the use of the fellows of that body.

The great characteristic of the medical literature of former days was originality; we now live in the age of compilations. Absolute nescience concerning the pathology and treatment of any important ill " our flesh is heir to," so far from being an impediment to the indoctrination of others on the same topic, is, it now appears, a condition qualifying one for that purpose.

During an extensive course of study, necessary to remove his own ignorance, the diligent student—in these scribbling times— excerpts copious extracts, and furnishes them, second-hand, to his brethren.

[a] See Dr. Henry Kennedy's paper, The Influence of Food on the Intellect, read before the Social Science Congress, 1861; also Dr. Todd's 16th Clinical Lecture, 1861.

It is presumed to be incumbent upon every member of our profession, now, to write; indeed it is considered necessary that the professional career should be inaugurated by authorship; consequently, having no resources of his own from which to draw, the neophyte is compelled to encroach upon the accumulations of others.

The receipt for the production of a book is very simple—requiring, indeed, some labour, but merely of a mechanical nature. It is as follows:—Having chosen a subject upon which to write, you read and copy the opinions of as many authors as can be procured who have already published on the same subject. These extracts are then to be arranged in chronological order, and the bias of your own mind upon the collection is subsequently to be set down. All then required is your own name to the title-page, and the work is accomplished.

It is comforting to find that *we* are not singular in the exercise of this fashion of publication. The present volume fully attests that America is not free from the prevailing habit of our islands.

We are not acquainted with the professional standing of the author, or whether he be qualified to be considered as an authority upon the subject on which he treats; but that the book has been " got up" in the manner we have described above, one example will suffice to show; and the chapter we allude to may be taken as a fair sample of every one in the volume.

The introductory chapter commences with the following axiom:— " Among all the causes which make labour difficult and dangerous, none are so much dreaded as placenta previa." This must be demonstrated satisfactorily, for the information of the medical gentlemen who compose the body of fellows of the Massachusetts Medical Society. The author accordingly proceeds thus with his task:— " There are none more perilous," says Lamotte, " than that in which the after-birth presents itself before the child." " Hemorrhage," says Deleurye, " is a fearful occurrence to a woman in labour"—" Conquest says"—" Maunsell remarks"—" Denman considers"—" The elder Rigby opens his admirable essays by stating"— " Dr. Collins says"—" Dr. Jn. Ramsbotham says"—" Duncan Stewart says"—" Mr. J. T. Ingleby remarks"—" Madame La Chapelle remarks "—" Dr. Ed. Rigby says"—" Mr. Burns remarks"—" Dr. James Hamilton says"—" Dr. F. H. Ramsbotham states"—" Cazeau remarks"—" Dr. F. Churchill remarks"—" As Nægelè has observed"—and as Professor Meigs " has spoken," so say, remark, and speak all: viz.—unavoidable hemorrhage *is* a dangerous

complication in labour; and so, we are sure, the gentlemen of the Massachusetts Medical Society may rest satisfied that such is the fact. But as *we* are already aware that all our midwifery class-books have told us this tale, and as our experience as practitioners has taught us more forcibly the fact, the only new matter we can glean from Dr. Read's introductory chapter is, that he, in the absence of practical experience, and from defect of early education, required to consult every authority before he could be thoroughly convinced of it himself—a consolatory reflection for his patients.

Upon looking at the heading of the next chapters, however, we expected to discover some interesting novelty. The question—"How is placenta previa produced?" would form a fine subject for an original essay, and is one which would require a very great amount of medico-physiological learning and research. Yet here our author by no means quotes many authorities; but, after about a page has been devoted to its consideration, dismisses the subject very simply, very sensibly, but by no means originally, as follows:—

" If we admit the theory that the ovum may be impregnated by the male fluid as well *after* it has left the ovary as while retained within the unruptured (*sic*) vesicle, the difficulty of accounting for placenta previa is, to a great extent, removed. For the vivifying influence of the semen may not have been communicated to it until just at the time the ovum was leaving the cavity of the uterus, at the os uteri itself, where, in consequence of this impulse, it attaches itself, and, as the pregnancy goes on, developes the phenomena of placenta previa."

This chapter headed " How produced," then suddenly branches out into a statistical account of the frequency of the complication; and we are given all the cases recorded by obstetric statistical authors (with one exception, to which we shall presently draw attention), " Dr. *M'Clintoc*" (*sic*) included. These amount to the number of 1,276 out of 1,542,772 deliveries, or once in every 1,200 deliveries. The concluding paragraph is concerning the diagnosis of placenta previa. This important consideration is most curtly alluded to, thus:—

" *Diagnosis.*—The period of pregnancy at which those symptoms occur which lead us to anticipate placenta previa is very uncertain. They may manifest themselves at any time after the third (*sic*) month; but, as a general rule, are more frequent during the sixth, seventh, and eighth, than at an earlier period. When, therefore, attacks of hemorrhage come on in the latter months of pregnancy, without apparent cause, no time

should be lost in ascertaining if this complication is present. Dr. Robert Collins remarks—' Whenever hemorrhage is met with, to any extent, in the last three months of pregnancy, it is impossible to be too watchful of our patient ; as we know not the moment it may become so profuse as greatly to endanger life.' In this opinion," says the author, " all obstetric writers agree; and the importance of an early examination cannot be over-estimated nor too strongly urged."

And this is the amount of Dr. Read's lore upon *the diagnosis* of placenta previa! That is, when hemorrhage occurs towards the terminal months of gestation, especially, no time should be lost in ascertaining if the flooding be the result of placenta previa! Not one word as to the manner of arriving at a correct conclusion, further than, that an examination should be made! Surely, when our author took such pains to inform us that placenta previa was a dangerous complication, we were justified in expecting he would have given a little more information on its diagnosis than he has done. On this point, of all others in connexion with his subject, the author would have had an opportunity of displaying *practical* knowledge.

With respect to the physiology of the utero-placental circulation, Dr. Read favours us with no less than 38 pages of quotations from Hunter down to the authors of the present period. The special causes of the hemorrhage in cases of placenta previa occupies 34 pages of matter similarly compiled—the remainder of the volume being consumed in the consideration of the treatment of this unfortunate condition.

And now the statistics commence with a vengeance. To arrive at a correct view of the treatment of placenta previa our author proceeds, according to the advice of the Apostle Paul, which he very properly states, "applies as well to medicine as theology," viz., " Prove all things, hold fast to that which is good;" and in following out this inspired teaching, Dr. Read collects all the cases of placenta previa he can find the history of on record, and arranges them into stupendous tables—exhibiting a vast amount of labour and patience—showing their termination and treatment under various circumstances.

The first table contains the facts connected with 52 cases where the placenta was expelled and the child born, by the unaided efforts of nature.

The second table gives a report of 26 cases of "spontaneous separation of the placenta with artificial delivery of the child"—viz.,

those in which uterine action was sufficiently powerful to throw off the placenta, but failed in delivering the child.

Table the third gives 31 instances in which the separation of the placenta was artificial, and the delivery of the child natural.

The fourth table includes those cases in which both the placenta and the child were artificially delivered—consisting of 51 examples.

"These four tables comprise all the instances in which the placenta was completely detached from the uterus before the birth of the child."

The fifth table displays 123 cases in which the placenta was partially detached, and the child was subsequently delivered without assistance. In other words, when a portion of the placenta was detached to an extent sufficient to admit of the child's delivery.

Table the sixth contains the treatment of 557 cases in which a portion of the placenta was detached, and the child delivered artificially.

Table the seventh gives those cases in which the placenta was perforated, and the child variously delivered.

And table the eighth exhibits those in which the mother died undelivered.

These elaborate tables are drawn up with a view to the determination of the relative value of the different methods of treatment. They are formed upon the following principle in the first four, viz. :—The number—by whom reported—age of women—number of pregnancy—duration of pregnancy—condition at delivery—state of os uteri—presentation of placenta, *i. e.*, whether partial or complete—presentation of child—amount and description of hemorrhage before interference with placenta, when the placenta was separated for example—hemorrhage after that interference—hemorrhage from first interference to time of delivery—the mode of delivery, and result to mother and child. The other four tables are somewhat similarly arranged. When it is considered that our author has thus tabulated so many as 891 cases in these eight tables, some estimate may be made of the amount of labour his task must have demanded; and an idea may be formed, at the same time, of the trouble necessary for its perusal. It is to be regretted that partial and complete placenta previa have been indiscriminately combined in all the tables. Our space will not admit of any lengthened analysis of these statistics, so we shall content ourselves by giving the general summary of our author upon them. He says, from the fact that 670, or more than two-thirds of the entire number, come under the denomination of partial placenta previa,

"That the method proposed by Professor Simpson will be available in only a small fraction of cases; and that the old practice of turning, and delivering by the feet, without disturbing the connexions of the placenta any more than is necessary for the purpose, must, after all, be our main resort, and the method which, in the mass of cases coming under charge, will most likely be required."

From the data of his tables our author arrives at the following conclusions:—

"1st. The danger to the mother in placenta previa increases as the period at which labour comes on approaches full time; a result rather to be expected from the increased capacity of the uterine vessels as pregnancy advanced to its termination. It is, therefore, better to terminate the labour after it has really begun, than to endeavour to conduct the labour to full time.

"2nd. The danger to the mother is less when the os uteri is completely covered, than when a portion only is involved in the placental attachment; and least of all when the attachment becomes nearly or quite central with reference to the os, if the contractions are vigorous enough, that the placenta will be thrown off and expelled into the vagina, and the hemorrhage be checked.

"3rd. The condition of the mother is a much more important element in making a prognosis of the case than the amount of blood lost. . . . The condition of the mother, then, should be most carefully watched, and the appearance of any symptoms indicating debility, or a tendency to collapse, should be the signal for the adoption of such remedies or such a course as will the most speedily and safely insure the delivery of the child. And they should be put into effect without any delay, always bearing in mind the fact that operations which are perfectly safe to the mother, when her vital power is comparatively undiminished and unimpaired, become almost certainly fatal if performed when she has become exhausted by hemorrhage and suffering.

"In those cases where the pains are vigorous, and show a disposition to be permanent (the head presenting, the os in good condition, and the strength not materially impaired), rupturing the membranes, by letting off the waters, and bringing the child's head down upon the os, will, in most instances, be enough to check the bleeding, and place the mother in a safe condition. When, however, a want of tonic power is manifested, or it is probable that resort must be had to forced delivery, the discharge of the waters in this way will only increase the difficulty of the operation and the danger to the mother.

"5th. The danger to the mother is materially increased by artificial delivery. But the same statistics which show this result also make it

evident that this increased fatality is owing, *not so much to the operation itself,* as to the enfeebled and exhausted condition of the mother at the time; and that, with a favourable condition on the part of the mother, there is no more danger in resorting to it in placenta previa than in ordinary cases of difficult labour.

" 6th. The effect of artificial delivery to endanger the life of the mother in placenta previa being, therefore, almost directly proportionate to the degree of exhaustion under which she labours, it should be the aim of the practitioner to perform this operation before such a state is reached.

" 7th. If, from the progress of the case or the conditions of the labour, a resort to artificial delivery must finally be had, it should not be delayed an instant beyond the time when the dilatation or dilatibility of the os uteri permits the introduction of the hand into the uterus—the danger to the mother from forced delivery being directly proportionate to the degree of exhaustion under which she labours.

" 8th. When, from the rapidly-failing condition of the mother, or the presence of any cause rendering artificial delivery impossible, a resort to the foregoing is forbidden, the placenta should be wholly separated from the uterus, and such remedies made use of as will recruit the strength of the mother, until reaction having been established, she can be delivered in whatever way may be deemed best.

" 9th. The tampon may be used advantageously in all those cases where, with an amount of flooding sufficient to materially affect the constitution of the mother, the os uteri remains *so rigid* (*sic*) that it is impossible to perform artificial delivery. But while, under these circumstances, it is important to gain time for the dilatation of the os, and, at the same time, prevent hemorrhage from too speedily exhausting the mother; under an opposite state of things a resort to the tampon, by inducing this temporising policy, will often cause a loss of valuable time, and in this way make just the difference between a safe and a fatal issue. As the effect of this application is not only to check the hemorrhage, but also to excite labour pains and dilate the os uteri, it is totally forbidden in all cases where either, or both, of these results may not be desired.

" 10th. The effect of ergot being of a two-fold nature, according to the condition of the system (ecbolic or parturient where the nervous energy is undiminished, and stimulant when there is a want of this), it should not be administered when there is a probable necessity of terminating the labour by an operation, unless at such an interval that the effect of it is either exhausted, or will not come on until after the operation is finished, or the condition of the mother is such that it will act merely as a stimulant.

" 11th. In cases when the exhaustion is excessive, and version is the only alternative, after the feet have been brought down, the body of the child should be left undelivered until the uterus has been roused to con-

tract, and a firm condensation of its walls has been secured; at least it should be withdrawn so steadily as to prevent the evil consequences which sometimes follow too sudden delivery."

We have quoted these conclusions of our author *in extenso*, inasmuch as they are the absolute results of his laborious compilations. It is for our readers to determine, whether they have received any new light on the subject of the treatment of unavoidable hemorrhage !

It is not our intention to make any lengthened observations upon these, our author's, conclusions; but we cannot close our notice without alluding to the circumstance of his having omitted to mention the most recent statistics on placenta previa published in this country. Dr. Collins, and Drs. Hardy and M'Clintock's Reports of the Dublin Lying-in Hospital only have been produced. Drs. Sinclair's and Johnston's publication was, we presume, not within his reach, or he would have brought their statistics forward also. We strongly recommend the latter publication to the author's attention. In it he will see the treatment of placenta previa briefly but fully set down; and the result of that treatment also exhibited, proving its soundness and showing, that in the Irish school of midwifery there exists no doubt relative to the mode of procedure to be adopted, under every variety of this complication.

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*Etudes sur le Cathétérisme Curviligne et sur l'emploi d'une Nouvelle Sonde, dans le Cathétérisme Evacuatif.* Par Le Docteur J. A. GELY. Avec 101 figures. Paris: Germer Baillière, 1861. 4to, pp. 172.

*Studies on Curvilinear Catheterism, and on a New Sound in Evacuative Catheterism.* By DR. J. A. GELY. With 101 figures. Paris: Germer Baillière, 1861. 4to, pp. 172.

THIS rather voluminous work pretends to teach us that our previous notions on introducing instruments through the male urethra into the bladder are erroneous, and not in accordance with anatomy or pathology. After a very long preamble, the author comes to the point in the last few pages; he finds that the curve of the urethra is not regular, but is composed of two curves, which are arcs of different circles; the posterior, which includes the mem-

branous and bulbous portions, is fixed; whereas the anterior is flexible, not fixed, and hence its curve is liable to alteration. It is the curve of this posterior portion that we are to take into consideration in giving the requisite bend to the catheter, previous to its introduction; the anterior portion of the canal, for the reasons stated, readily adapts itself to instruments of different shape and measurement. The curve of this posterior portion, the author states, corresponds to an arc formed by the sixth part of the circumference of a circle of ten centimetres diameter (3·9 inches); and great stress is laid on passing an instrument, which will not give to any portion of the canal a direction or curve not natural to the part. According to Dr. Gely's statement, this is done in using the ordinary instruments, which are bent to correspond to the curve of the anterior portion of the canal; this curve is greater than that of the posterior, so that we have the urethra stretched on an instrument of greater curve than that of the part itself. If such an instrument be used, the surgeon will experience difficulty and the patient inconvenience, owing to the straightening of the curved canal, and also from the point of the catheter impinging on the walls of the urethra; whereas, it should, if properly curved, pass directly in the centre of the passage.

This difficulty is more imaginary than real, as every practical surgeon, who is in the habit of passing the catheter, knows that no matter what the curve of the instrument may be, he can manage to pass it by adopting the usual manœuvres. Of course we are now considering the healthy, and not a diseased urethra. Notwithstanding, though the author has discovered this happily constructed instrument, which is to fulfil all these requirements, and to fall into the bladder merely by its own weight, he yet gives directions as to depressing the handle of the instrument, and several other expedients put in practice by every surgeon, *when requisite*, in using the old-fashioned instruments, which have served us so long and so well. This is a tacit acknowledgment, that these newly described instruments sometimes prove as difficult of management, perhaps, as often so, as their predecessors.

It is ridiculous to suppose that the same curve will suit all cases, or any particular class of cases. Every day we have opportunities of seeing that nature is capricious; there is no such thing as symmetry in nature; no two individuals are formed exactly alike; no two surgeons in Dublin would set about passing a catheter in identically the same manner, and yet they will all succeed;

probably the same surgeon may have occasion to alter the curve of
the instrument twice or thrice before he accomplishes introducing
it into the bladder.

The curve of the newly described catheter is intended to
correspond to the curve of the posterior portion of the urethra.
Dr. G. divides his individuals into four classes, according to their
height, and development of the organs of generation.

The following are his measurements :—

No. 1 for persons of low stature; the curve of the instrument
should represent the third of the circumference of a circle of ten
centimetres diameter (*i.e* 3·9 inches).

No. 2 for persons of somewhat larger size; the curve of the
instrument should represent the third of the circumference of a
circle of eleven centimetres diameter (4·3 inches).

No. 3 the most usual size, for individuals of middle stature;
the curve should be the third of a circle of twelve centimetres
diameter (4·7 inches).

No. 4 for persons of large stature; the curve should be the
third of a circle of thirteen centimetres diameter (5·1 inches).

Nos. 1, 3, 4, are the sizes in most request; No. 2 is not required
as No. 3 will do in that class; and instead of No. 1, the author
proposes to use No. 3, depriving it of one-tenth of its curve, so
that the instrument required for No. 1 class, should represent nine-
tenths of the third of the circumference of a circle of twelve
centimetres diameter.

The practical inconvenience of such a method is, that a surgeon
setting about the treatment of a case where the urethra is diseased,
should be provided with a set of instruments of each class, so that
he would require exactly four times the number of instruments
that at present we deem sufficient.

The work exhibits much labour; it is well put together, and
gives a complete history of " Cathétérisme" from the earliest period
of the straight catheter; it must be considered as a useful addition
to our knowledge of the surgery of the urethra. The author has
made a very extended series of investigations as to the true shape
and course of the urethra, and gives figures taken from the very
numerous dissections he has made for this purpose. The method
he pursued is an ingenious one, but perhaps not the best suited to
ascertain the true position of the parts. He made a section of the
pelvis in the median line, and then took a cast, in plaster of Paris,
of the cut surface; and from this he prepared his diagram. We

incline to think that if he had first hardened the parts in spirit—after the method adopted by the late Mr. Houston, in making the beautiful preparations in the Museum of the College of Surgeons—the results would have been more worthy of reliance. Notwithstanding this, we think these figures demand the careful study of all practical surgeons.

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*On the Parasitic Affections of the Skin* By T. M‘CALL ANDERSON, M.D., &c. London: Churchill. 1861. 8vo, pp. 152.

THE substance of this volume, which appeared from time to time in the pages of the *Medical Times and Gazette,* having been thoroughly revised and corrected, is now, with the addition of wood-cuts, placed before the profession.

Dr. Anderson, in his introduction, adverts very judiciously to the prevailing neglect of the study of skin diseases; and after an allusion to irrelevant matter, passes on to the classification of the parasitic affections of the skin, which he conveniently divides into two heads.

1st. Cutaneous affections due to the presence of a *vegetable* parasite. 2nd. Cutaneous affections due to the presence of an *animal* parasite.

Under the vegetable parasitic class he places favus, tinea tonsurans, alopecia areata, and pityriasis versicolor, believing each of these four divisions to be due to the presence of a distinct parasite.

Favus, Dr. Anderson believes due to the presence of the Achorion Schönleini, and under this genus he includes the species—Scaldhead, honeycomb ringworm, Porrigo favosa, Porrigo Lupinosa, Tinea vera, Porrigo-phyte, Erbgrind, Teigne faveuse (Alibert). He regards Favus as affording an example of a highly successful mode of treatment, founded upon a correct knowledge of the nature of the affections; more particularly as demonstrated by the microscope. The remainder of the second, and the whole of the third chapter he devotes to the symptoms and microscopical appearances of the diseased structures; after describing the modes of extracting the hair, as recommended by Bazin, and others, he goes on to mention some of the parasiticide applications he has found most efficacious, of which he gives bichloride of mercury the preference, two grains of the bichloride to an ounce of water being sufficiently strong.

Among the other remedies, he refers to sulphur, turbith mineral, and oil of cade; and he goes on to say—

"It will be seen that the local is the only treatment capable of effectually curing favus; but, at the same time, in this, as in all local diseases, the general health must be attended to, and any deviation from a natural state corrected when possible."

Again—

"In the epidermic variety depilation is not so necessary, the application of a parasiticide lotion, as a solution of the bichloride of mercury, being usually sufficient to remove it. When the disease attacks the nails, the treatment is also simple. It is necessary to destroy gradually, by means of a small file, the portions of nail covering the favus matter, and after arriving at it, the application of a parasiticide is quite sufficient to destroy the fungous growth.

In chapter V., Dr. Anderson treats of tinea tonsurans (due to the presence of the tricophyton), adducing proofs that Herpes circinatus, Herpes tonsurans, and Sycosis are merely varieties of the same disease; he then goes on to the symptoms, diagnosis, and prognosis of Herpes circinatus, sycosis, and Herpes tonsurans; and, in chapter VII., he details the causes and treatment of these three varieties of tinea tonsurans.

Chapter VIII. is occupied with the symptoms, causes, diagnosis, and treatment of the alopecia areata, a disease due to the presence of the microsporon Audouini; an excellent woodcut of the hair from a case of this disease, containing spores and tubes of the parasite, being subjoined.

Of the disease due to the presence of the microsporon furfur, he adduces the pityriasis versicolor; and, in describing its symptoms, causes, and proofs of its contagious nature, he remarks as follow:—

"Now, I quite admit, that no one case taken separately is sufficient evidence of the disease being contagious, but taken in the aggregate, I think they form positive proof of the contagious nature of the disease. It is, however, equally certain, that it is not so contagious as some of the other parasitic affections, else we would not meet with so many instances of husbands affected with the disease who have not communicated it to their wives, and *vice versa*. This leads me to state my belief that it is necessary to the development of the parasite, that the constitution of the person attacked, be favourable to its growth. I believe that the reason this disease is more feebly contagious than other parasitic affections, is—

that fewer persons supply a soil favourable to the germination of the parasite."

Chapter X. is taken up with considerations of phthiriasis and its species, pediculus corporis, pediculus capitis, and pediculus pubis, all due to the presence of pediculi.

In chapters XI., XII., and XIII., he treats of that too familiar affection, scabies; and after describing the history of the discovery of the insect (acarus scabiei), its habits and appearance, he describes the symptoms and microscopic appearance of the crusts of the so-called scabies Norvegica; and under the heading of treatment, he details the constituents and mode of application of the pomade or Helmerich, the lotion of Vleminckz of Belgium, and Hebra's modification of Wilkinson's unguent, concluding with the precaution—

" That it is necessary, whatever preparation you employ, that it be rubbed into the skin of the *whole body*, with the exception of the head, which is not usually attacked; for if one impregnated acarus is left unscathed, the disease will soon be as bad as ever."

We have read this little volume with much pleasure. That it contains some statements which further investigation only can confirm, is very wisely anticipated by the author in his preface; but, on the whole, it savours of a desire to found the pathology and treatment of cutaneous diseases on a true base, and thus contrasts very favourably with many books which have issued from the press of late years, on the same subject. The work is illustrated with 21 woodcuts, which, on the whole, are neatly executed.

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I. *A Manual of Chemistry, Descriptive and Theoretical.* By WILLIAM ODLING, M.B., F.R.S., &c., &c., &c. Part I. 8vo, pp. 380. London: Longman and Co. 1861.

II. *An Introduction to Practical Chemistry, including Analysis.* By JOHN E. BOWMAN, F.C.S., &c., &c. Edited by CHARLES L. BLOXAM, Professor of Practical Chemistry in King's College, London. Fourth Edition. 12mo, pp. 311. London: John Churchill. 1861.

THESE two works are both intended for the use of students; the first, which is incomplete, " was undertaken more especially at the

request of Professor Brodie, who wished to have for the use of his class at Oxford, a chemical text-book, arranged in accordance with his own method of teaching;" it represents the advanced school of chemists, not only of Oxford, but of Europe, and may be regarded as a class book of Young-Chemistry; the other book is of humbler pretension, and in its present fourth edition, as in its first, aims at leading the student, by the beaten paths of recognised methods, to a knowledge of recognised truths of chemical science; or, as Young-Chemistry would say, if she knew Latin, " non quo eundem est, sed quo itur."

Mr. Odling's work possesses a value for the accomplished chemist, who may wish to become acquainted with the nomenclature of Laurent and Gerhardt, but will be found very confusing to the student, who will discover, after he has mastered it, that he is unable to understand the language of other chemists.

In 1860, a congress of chemists met at Carlsruhe, to settle the controversy that exists as to chemical nomenclature, but separated without arriving at any conclusion; partly on account of the confusion of tongues, nearly as great as that of *Babel*, and partly on account of the obstinacy of the older chemists. The new nomenclature, which Mr. Odling adopts, possesses, unquestionably, some advantages, but it requires such a thorough remodelling of almost universal forms of language, that many chemists think it will never be universally adopted.

There are, really, two questions involved; one, that of the use of unitary formulæ; and the other, that of the change of the atomic weights of a large number of the elements. The first of these questions has been discussed for a long time, and the use of unitary formulæ will ultimately prevail, but the progress of the reform has, we think, been retarded by its being mixed up with the second question, which involves practical difficulties of the gravest kind.

Let us illustrate, by an example, the change required by the use of unitary formulæ: according to common ideas, sulphuric acid is a sulphate of water, and is expressed as such by $HO,SO_3$, and sulphate of potash is expressed by $KO,SO_3$.

According to the unitary notation, sulphuric acid is considered as sulphate of hydrogen, and sulphate of potash as sulphate of potassium; and both are expressed as $H,SO_4$, and $K,SO_4$. The theoretical difference in the two points of view is considerable, but the change of notation is slight.

In like manner, nitric acid and nitrate of potash, would be written

by the common method, $HO,NO_5$ and $KO,NO_5$; and by the unitary method $H,NO_6$ and $K,NO_6$.

If this were the only question involved, Young-Chemistry would carry the day, as the theoretical advantage and clearness of the unitary notation are very great; but, unfortunately, the other question of change of atomic weight intervenes, and as sulphur and oxygen are involved in it, while nitrogen, hydrogen, and potassium escape, Young-Chemistry requires us to write, instead of $HO,SO_3$, or $H,SO_4$, for sulphuric acid, $H_2SO_4$, while we write $K_2SO_4$ for sulphate of potash; on the other hand, instead of $HO,NO_5$, or $H,NO_6$, we must write $H,NO_3$, and instead of $KO,NO_5$, or $K,NO_6$, we must write $K,NO_3$.

By the mixing up of the two questions, the result is produced, that the majority of the formulæ used by the new school of chemistry are not intelligible to older chemists, without a good deal of preliminary troublesome consideration, which most men are too indolent to give.

The inconvenience caused by the change of an atomic weight, in the case of an important element, may be understood from the case of mercury: if the chloride of mercury be prescribed, it is necessary that the apothecary should know what school of chemistry the physician belongs to, in order that he may avoid the risk of poisoning the patient. If such be the practical difficulty resulting from the change of the atomic weight of a single metal, let us imagine the confusion that must ensue from the change of the weights of the metalloids, oxygen, sulphur, carbon, and silicon. And to add to the confusion in the case of the latter, the atomic weight is changed in a manner different from that employed in the case of the other metalloids.

Of the 57 elements, Mr. Odling changes the equivalent number of twelve, viz., oxygen, sulphur, selenium, tellurium, carbon, silicon, titanium, tin, tantalum, glucinum, yttrium, thorium; and of these elements, silicon is altered in a manner peculiar to itself, and glucinum, yttrium, and thorium, are also changed according to a law of their own.

The advantages of a decimal system of weights and measures are obvious to every intelligent man, and yet few believe that it will ever be adopted in England, in consequence of the practical inconveniences of the change; and it is well known that the introduction of the Calculus among English mathematicians was retarded for an almost incredible period, by our prejudices in favour of Newton's Fluxions. Now, no chemist of the new school can pretend that the

advantages of the new notation and atomic weights are at all comparable with those of the reforms just mentioned, one of which is still struggling hopelessly for a hearing, and the other of which took place only within the memory of many living men, after a struggle of more than a hundred years between reason and prejudice.

Independently of its new notation, there is nothing remarkable in Mr. Odling's book, which contains the usual amount of information to be found in manuals of chemistry, and, we must add, not always conveyed in the most interesting or instructive manner.

The fourth edition of Mr. Bowman's book is an excellent guide to the learner commencing his laboratory experience, and will be found a useful aid to the student preparing for an examination in chemistry. It should be remembered, however, that no such guide can dispense with the aid of a skilled practical teacher, under whose guidance the learner can acquire a knowledge of manipulation, in a few days, which he could never obtain from books.

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*Précis Iconographique Des Maladies Vénériennes.*    Par M. A. CULLERIER, Chirurgien de Hôpital du Midi, &c., &c.    Paris, Mequignon Marvis, 1861.    Parts I., II., III., pp. 180.    Numerous Coloured Drawings on Steel.

THE success of former literary ventures has inspired the above enterprising firm with energy that might well be imitated by their comrades in trade of this country.    Bernard and Huette's beautiful little book on Operative Surgery, and Goffre's on Bandaging, are pretty well known as examples of the perfection to which illustration can be carried as a means of instruction, and at what moderate cost.

The present work is on the same plan, and we have the pleasure of acknowledging the receipt of the first three parts of ten, which are promised to complete a volume of 700 pages, with 80 plates on steel, from drawings made by M. Levillé, after nature.    It is impossible to speak in too high terms of the mode in which all parties concerned in the publishing of these works have done their part. Paper and printing are admirable; and the illustrations could not possibly be surpassed, for accuracy of delineation, and perfection of colouring.

The present numbers treat of gonorrhœa, and commence with a

short historical sketch of the disease from the times of Moses, through Hippocrates and his successors, to the days of confusion in the sixteenth century, when, for the first time, it became the fashion to look upon it as an off-shoot of syphilis. Passing from its history, the author deals successively with its seat, which, in accordance with routine rather than fact, he places at first invariably in the fossa navicularis; then he advances to the causes and nature of gonorrhœa. Under the latter head we have a full account of the views of Hunter, and those who followed him, in classing it with syphilis; and of the opposing views of the "*non identistes*" of whom Ricord is the modern exponent. This position he has attained by following out to demonstration, opinions long since fully taught in this city, by the late Mr. Hewson and Professor Porter. Both these gentlemen in their lectures at the Meath Hospital, and else-where, demonstrated the existence of urethral chancres as the cause of apparent syphilization by the gonorrhœal secretion. Had their observations been attended to, this vexed question would long since have been set at rest.

Little now can be said of the symptoms of gonorrhœa, and we pass on to the treatment. Mr. Cullerier is strongly opposed to the abortive system, among the supporters of which we find the name of Carmichael quoted; nor does he seem to be aware of the value of very weak astringent lotions in the early stage; in fact, the routine treatment of copaiva and low diet prevails; and injections are not allowed to come into play till the inflammatory period has quite passed by. For this wide-spread neglect of the most valuable means of cure, the violent abortists are to blame; and it will take time and patience to bring people back to the due appreciation of injections, as the most reliable curative agent we possess in all stages of the disease.

The remainder of the first number is taken up with some of the accidental local complications of gonorrhœa—such as phimosis, paraphimosis, chordee, &c.; and, however valuable as a treatise for the student, it contains nothing that we need copy into our pages.

Similar remarks will apply generally to the second and third numbers, which continue the subject of gonorrhœa as it occurs in the female as well as in the male. We shall reserve further remarks until the numbers are complete, when we shall be able to take a more comprehensive review of the subject.

We have no doubt this work will have the large sale which its enterprising author and publisher deserve.

*Consumption, its Early and Remediable Stages.* By Ed. Smith, M.D., &c. London: Walton and Maberly. 1862. Post 8vo, pp. 447.

The author of this work tells us he has had four principal objects in view in writing it, viz., to take advantage of the growing belief of the day, that there is a stage of phthisis in which this disease is as remediable as it is irremediable at a later period; to write a practical work in which may be faithfully represented the actual condition of these cases, when regarded in the great numbers in which they have been brought before his observation; to treat the subject as far as possible on the inductive method, and on the improved physiology and pathology of the day; and to give practical effect to numerous series of special inquiries which have been made by him during the preceding seven years. In seeking to make the work practical, he has entered largely into all the questions which relate to food, exertion, climate, and others constituting hygienics, because such is in accordance with general feeling at the present time; because this part of medical knowledge is now being placed on the sure footing of scientific research; and because it must be through the conditions of the every day life of the patient that medicinal and other remedial agents may influence the constitution in so chronic a disease. For the same reasons he has entered fully into minute details, as it is upon them that the efficient working of a general plan essentially depends.

From the days of Hippocrates to those of Laennec, consumption was distinguished by its general symptoms almost exclusively, but Laennec introduced a new era, in which the state of the lungs took precedence of that of the general symptoms, and tubercle came to be regarded as the essence, the mark, and the starting point of the disease. It cannot be wondered at that this became the almost universal doctrine. Tubercle was something tangible, to be seen by every observer, and it came to be regarded as the essential feature of the disease, the cause of its progress in the lungs, and the source of injury to the general system; but now, at length, as we recede from the overpowering influence of Laennec's great discovery, broader and juster views are being taken; the state of the constitution which leads to the deposition of tubercle is attracting attention, and we begin to see that tubercle is not the cause of consumption, but only a consequence of the diseased state of the system—not the essence of the disease, but only one of its results.

It is customary at the present day to mark the progress of phthisis by reference to the lungs only, and to divide it into three stages, of which the first is limited to the period of deposition of tubercle, the second includes softening of tubercle and destruction of tissue, and the third is that period when a cavity exists. To this classification Dr. Smith objects, and, going back to the teaching of Lænnec and Louis, adopts their division into two stages,—that of deposition of tubercle and that of destruction, to which he adds a prior stage, to include "all the conditions existing before any evidence of the deposition of tubercle is afforded," and it is the consideration of this first or "pretubercular" stage, its definition, recognition, and treatment that the present work is chiefly devoted.

The evidences of this stage are found to be associated both with the general system and the lungs, and to be co-existent as to time in both; and while these evidences must be variable in degree, as the type of health varies between "sanguineo-nervous" and the "lymphatic" temperaments, their general expression is of asthenia or lessened vital power. States of the general system common to other diseases with consumption, but in this latter associated with other special and local conditions.

The method of investigation pursued has been by examinations, into the precedent and present conditions, of all the patients presenting themselves at the Brompton Hospital, and, where practicable, comparing these with the results obtained by the author in his elaborate researches into the conditions of the body under varying influences, of which we gave a full analysis in our last volume.

It appears that, somewhat contrary to common belief, there was no one temperament exclusively found in phthisical patients, but that the two extreme types of sanguineo-nervous and lymphatic are largely diffused amongst them, the general manifestations varying somewhat, as we have already remarked, in consequence. The whole processes concerned in the function of alimentation are commonly lessened in vigour ; the appetite seldom remains natural, but is somewhat lessened in respect of food in general, and of some foods in particular, and is commonly wayward and uncertain, and there is generally some derangement of the function of digestion, but this is frequently small, and in such cases is not important; the tongue is more or less discoloured, or loaded with a buff-coloured coat, presents enlarged and projecting papillæ, and is not unfrequently large and flabby; there is a sense of oppression

after meals, and tenderness on pressure over the epigastrium at most periods of the day, and a sour taste in the mouth and flatulency. These conditions are most commonly found with the lymphatic temperament, whilst in the sanguineo-nervous the tongue retains its usual size and colour, and remains clean.

The weight and bulk of the body are almost universally diminished, a fact indicating numerous conditions of great importance, but not necessarily dependent on a loss of nitrogenous tissue, or explained by it. But it appears from Dr. Smith's researches that, when there is a diminution in the food taken, when there is a less perfect assimilation of food, and when fat is disliked, the store of fat in the body is lessened, the elimination of fluid increased, the nitrogenous parts of the body are less perfectly restored, and the tone of the tissues is lowered. Dr. Smith has ascertained many very remarkable circumstances with regard to the elimination of fluids; in addition to the well-known influences of temperature, atmospheric pressure, exercise, and the quantity of fluid ingested, it appears the kind of food taken affects it materially; fat, flesh and animal foods preventing the elimination of fluid, and the use of starchy food favouring it; therefore, so long as an abundance of fat is supplied from without and duly assimilated, or there is an excess of fat in the body, there is a power to withhold the extreme emission of fluids, but when a person is losing fat, he not only loses weight *pari passu* with the loss of fat, but when the store of fat is exhausted, he loses weight in a rapidly increasing ratio, from the more rapid elimination of fluid; so the loss of appetite for fat and flesh has a far greater influence over the weight of the body, than the mere loss of weight from the want of these substances would account for.

In the early stages of phthisis the elimination of fluid by the skin, (perspiration), is, in the absence of inflammation, in excess, this not only cools the body injuriously and interferes with the heart's action, but wastes the body by causing a demand for vital transformation to supply heat from within; and, in addition to coldness of the extremities, it causes depression and exhaustion of the nervous power. While it is true that perspirations are most profuse in the latter stages of the disease, it is a mistake, Dr. Smith says, to think they are confined to these periods, on the contrary, he says they are met with, though in a less degree, in a majority of cases in the early stages.

The muscular power is commonly lessened; the circulation is

enfeebled and somewhat quickened; and respiration is shorter, shallower, feebler, and perhaps quicker. When first questioned it commonly occurs that the patient is unaware of any shortness of breathing, but he subsequently admits that on any unusual exertion, as ascending stairs, or running, his breath is short. He also frequently finds that this state of the respiration is increased after a meal, and if he eats heartily, or there be much dyspepsia, there is marked dyspnea. On carefully looking at the front of the exposed chest, it will commonly be found that the breath motion is lessened over the whole thorax, but particularly at the upper part of it; and, when the spirometer is used, it is found that the quantity of air, inspired per minute, is considerably lessened. The feebleness and shallowness of respiration thus manifested, must be attributed to weakened muscular power and impaired nervous influence; and the increased rate of respiration commonly conjoined with them, is probably compensatory for the diminished quantity of air taken in at each inspiration.

Dr. Smith also finds, that the vital capacity of the lungs, as shown by the quantity of air it is possible to expire after the fullest possible inspiration, is diminished even when there are no evidences whatever of the presence of tubercular deposits; but there are, he says, so many sources of variation in the results of spirometry that, until the case presents features which, in the hands of competent men, render spirometry unnecessary, we can seldom go beyond the fact of having ascertained the amount of air inspired, and must infer the cause of the supposed diminution with caution.

As a general observation, it may be stated that, at the early stage of phthisis, there is only a small or moderate amount of coughing, and what there is, is commonly short, and repeated a few times at each attack; it is not usually violent or causing much succussion, but sometimes it is spasmodic. It is usually excited by going into cold air, by a chill to the surface, and often by eating; it is frequently irritable in the early morning, and especially soon after rising. Dr. Smith makes some novel and interesting remarks on the mechanism of cough in general, in which, he believes, the pharynx takes an important part, and the greater part of the cough of early phthisis he attributes to hyperesthesia of the pharynx, The quantity of secretion expectorated is very small, and does not exceed one quarter or half an ounce in the day, and the chief sources of it in this early stage, are the fauces and pharynx, which are, in this stage, according to Dr. Smith, the chief sources of hemoptysis also.

We now proceed to discuss the conditions which are connected with the lungs. These are, first, lessened movements of the chest, to be detected by the eye, by palpation, or by measurement, as with the instrument invented by Dr. Sibson, or that of Dr. Quain, or better still, by measuring the quantity of air inspired; second, the vesicular murmur is less strong than occurs in health, both in ordinary and forced inspiration. On the patient inspiring forcibly, the inspiration sounds are, of course, increased considerably in intensity, but they are more or less tubular, and the vesicular sound is much less intense than occurs with the forced inspiration of health, there being still the same evidence of feebleness of inspiration; this serves to distinguish the feeble respiration of early phthisis from that of mere debility, *where the vesicular sounds and the trajet of the air become normal in deep inspirations;* third, as tubercle is deposited there is evidence of a localised and isolated obstruction to the current of air; fourth, dulness, on percussion, is a sign of great importance, but occurs in very different degrees, and under very different conditions; in the early stage there is an appreciable degree of dulness on the clavicles, and, indeed, over the chest in general, before the deposition of tubercle, but not till after the diminution in the expansion of the lung has been long continued.

The author offers the following summary of the evidences furnished by the external examination of the lungs:—

" 1. When there is less breath-motion, less length of inspiration, and feeble, yet tolerably even, vesicular sounds, both with ordinary and forced respiration over the whole chest, or particularly at one or both apices, with or without slight dulness, on gentle percussion, of the clavicles, and without *rales* or any sign of bronchitis, we believe that there is the early or the pretubercular stage of phthisis.

" 2. When there is dulness at least moderately pronounced and localised, and prolonged expiration, with, but sometimes without, flattening of the chest at the part affected, and with or without wavy or jerking respiration, and with unevenness of the respiratory sounds at the part affected, in addition to the signs of the first stage, and still without rales or other evidences of bronchitis, we consider that tubercle is deposited, and the disease in that part has passed into the second stage.

" 3. When general bronchitis is also present, the diagnosis from the examination of the chest is almost impossible, and whilst the progress of the general symptoms may aid us, a correct opinion can only be formed after the signs of old bronchitis have disappeared, or the general evidences of phthisis both in the lungs and system have increased.

" 4. The state of the general system is substantially the same, whether

before or soon after the first deposition of tubercle, but the degree of variation from health will have increased in the latter with lapse of time : hence, whilst this state must be considered in forming our diagnosis of phthisis, it is equally indicative in the two stages, except perhaps in degree."

*Treatment.*—Under this head, Dr. Smith first considers the indications for treatment, and the best method of fulfilling them, and then gives, in an empirical and categorical manner, a detailed statement of the whole plan he recommends. The first indication he holds to be to restore the bulk of the body by lessening elimination; for this he recommends, 1st. The inunction of oils and fats; lard, with the addition of a small portion of mutton suet, which renders it less liable to be rubbed off, being one of the best applications; spermaceti ointment, also, is very good; olive oil is, from its freedom from smell, least objected to by the patient, but has not sufficient viscidity; cod liver oil is objectionable because of its odour. 2nd. The application of cold water, which, by removing the atonic or relaxed state of the skin, always associated with an unusual tendency to perspiration, is, if effected with rapidity, very efficacious; but it must be applied so that tone may be restored without lowering the temperature of the body. 3rd. Clothing must be carefully attended to, so much being worn as will allow the skin to be cool, without the patient experiencing a cold sensation, and where the extremities are cold, it is essential that their covering should be abundant. 4th. Regulated but free exposure to the ordinary variations of the atmosphere is to be commended. 5th. Certain foods lessen the action of the skin, such as some of the forms of alcohol, coffee, fats and milk, and are consequently especially fitted for employment. The old and well-approved combination of rum and milk, or brandy and milk, in the proportions of two teaspoonfuls or a desert spoonful of spirit to half a pint of milk, is very proper, and especially in the early morning, when the skin is commonly very active. During the day no form is better than home-brewed ale, or, failing that, Dublin stout; but the dose should never be so great as to affect the head, nor should it be continued after the effect on the skin has been produced; and in the night hours, when perspirations are most frequent, food of almost any kind will lessen them. As for medicines, the well-known remedies, iron, zinc, lead, acids and vegetable bitters, lessen the action of the skin, sometimes also, valerian; and when the perspiration has an acid odour, alkalies are serviceable. All influences likely to increase elimination by the

kidneys and bowels, are to be avoided, such as drinking large quantities of water and other fluids, gin and purgatives.

The second indication is to restore the bulk of the body, by increasing the supply. There is very generally a deficiency of nitrogen in adolescence, in consequence of the diminution in the supply of milk, without a corresponding increase of nitrogenous foods. The proportion of nitrogen in bread is 1 in 22 ; but in milk it is 1 in 11, so that for every pound of milk omitted, there should be two of bread added ; and it would require $5\frac{1}{2}$ ounces of good, uncooked fat and lean meat, to supply as much nitrogen as is found in one pint of good new milk. In order that a large quantity of food may be taken, it is necessary to distribute it well over the twenty-four hours, and when the patient is unable to take sufficient food to supply the necessary quantity of nitrogen, Bouchardat's preparations of glutenized foods may be recommended, these are gluten bread, which may be toasted and eaten hot ; semola, the ground gluten bread, containing 80 per cent. of gluten, and chocolate, the best quality of which contains 10 per cent. of gluten. As the vital actions are greatly reduced during the night, it is important to supply food then as well as in the day, and the following is recommended by Dr. Smith as a scheme of daily diet :—

" 1. Immediately on awaking in the early morning, $\frac{1}{2}$ a pint of milk (hot if possible), alone, or with chocolate added, with bread and butter.

" 2. For breakfast : $\frac{3}{4}$ pint of milk, with coffee, chocolate, or oatmeal, and eggs or bacon in addition.

" 3. At 11 A.M. $\frac{1}{2}$ a pint of milk, or of good beef tea, made from ox heads or shins, with bread and butter.

" 4. An early dinner, with plenty of meat, and milk and egg pudding.

" 5. An early tea, consisting of milk with coffee or chocolate, and bread and butter.

" 6. An early supper of $\frac{3}{4}$ pint of milk with oatmeal or chocolate, and bread and butter ; or two eggs with bread and butter, and milk to drink.

" 7. During the night a cup of milk and a little bread and butter to be placed by the bed side and to be eaten if the patient should awake.

" By this mode a much larger quantity of food may be taken than would be possible if the food were given only at the usual meal hours, and as it will be taken in small quantities, the system will not be oppressed by it, and the vital actions will not be allowed to subside. It is a dietary which allows a considerable quantity of nutritious material, both nitrogenous and hydro-carbonaceous, to be stored up in the system, since it is rich in both classes of nutriment."

The third indication is to increase the vital actions, especially by stimulating the appetite and the assimilation of food, and improving digestion, by proper exercise and by regulating the kind of food used ; for, as Dr. Smith shows, some substances are not only easily assimilated, but aid in the transformation of other foods. Under this head Dr. Smith includes means for increasing innervation and all the vital functions ; but we must close our notice of this very valuable practical work with extracting the following remarks on promoting the expansion of the lungs, a prime object in the treatment of this stage of consumption :—

" The production of this complete expansion of the chest is oftentimes a circumstance of extreme difficulty, and sometimes it cannot be effected ; but the difficulty lies not in any impediment to the entrance of the air, but in the defect of muscular power to expand the chest, or in the impossibility of inducing the patient to comprehend the method by which it is to be effected : hence, however great the difficulty, it lessens by practice, if the practice be carefully and intelligently made.

" The plan which we adopt is as follows :

" The patient is placed in a sitting or standing posture, with the trunk erect, the shoulders drawn downward and backward, and the chest thrown forwards. The mouth is then kept a little open, and the patient is directed to inhale gently whilst he very evenly expands the chest to its utmost limits ; and at the end of the inspiration he is directed to make increased effort, and then to retain the chest in its expanded state for two or three seconds before expiration is commenced. If the mouth be shut, the nostrils cannot admit the volume of air with sufficient freedom ; and if, instead of an even and somewhat gentle inspiration, the air is drawn in quickly and forcibly, like suddenly snatching asunder the handles of a pair of bellows, it is impossible for the lungs to become perfectly expanded. If, at the end of the inspiration, there be not increased effort made, the mechanical act of distension is materially lessened, and the good which is effected is imperfect ; whilst there is a manifest advantage in keeping the lungs fully expanded for a few moments, and afterwards in preventing a collapse of the chest by a sudden and rapid expiration. The posturing of the chest is also important, not only by inducing that position in which the cavity may be most completely enlarged, but, by placing the relaxed and elongated pectoral muscles upon the stretch, and holding the shoulders firmly backward, the greatest amount of muscular power may be obtained.

" There are two of these conditions which it is very difficult to fulfil, viz., the prevention of a rapid and gasping inspiration, and the final effort at the end of inspiration to effect the complete distension of the

lungs. The former is more common in cases where the respiration is short, and the person is nervous and defective in readiness of apprehension, and in such cases is very difficult of attainment; whilst the latter is chiefly associated with much atonicity of the muscular system, and in the most intelligent and painstaking person is only perfect after long practice. Its increase is, however, a good measure of the improvement of the patient.

"On deep inspiration we find that the apex of the lung is not filled until the very end of inspiration, and we have explained this at page 202, by the common direction of the Bronchi, which carries the current downwards, and also by the great extent and direction of motion of the lower ribs, so that whilst in inspiration the air is admitted into all permeable parts of the lung, the lower part is first *filled* by voluntary effort, and then the upper: hence, for various reasons, we see the importance of the effort to inspire at the very end of the act of inspiration, with a view to cause the complete expansion of the apices of the lungs.

"We have found it always necessary to have the chest uncovered, and to watch carefully the movements of the parts during this procedure, so as to appreciate any defect in the performance; and moreover, it is commonly needful that the physician should show the action upon himself. It is needless to state that it is an easy process to those who can do it; but as its entire value rests upon the degree of perfection with which it can be effected, it demands that the physician be enabled from time to time to inspect the movements and correct their defect."

# PART III.

# MEDICAL MISCELLANY.

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*Reports, Retrospects, and Scientific Intelligence.*

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# RETROSPECT

## OF THE PROGRESS OF SURGERY DURING THE LAST DECADE

BY

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### GENITO URINARY ORGANS.

*The operation for Phymosis* needs some comment. In Mr. Erichsen's
Surgery, we have an emphatic condemnation of slitting up the prepuce
for the congenital form of this affection, and a description of circum-
cision, in which, after cutting off the foreskin and slitting up the mucous
covering of the glans, it is directed to trim off the angles and to *snip
across the frenum.* Against this last direction an equally emphatic protest
must be entered. Any meddling with the frenum is not only unnecessary
but unjustifiable. It is the most sensitive part of the organ, and a
wound of it is exquisitely painful and remarkably slow to heal; any
curtailing of the folds of mucous membrane, which spring from it, will
leave a cicatrix that will be more or less tight. Very troublesome
constrictions of the glans result from this operation, which partakes very
much of the character of meddlesome surgery. The skin of the prepuce
is not so much in excess as the mucous covering is scanty. An
operation, then, should have for its object to borrow from the skin in
order to make up the deficiency of the mucous membrane. This can be
done by drawing back the prepuce as much as possible, and freeing the

lining membrane by a succession of nicks either in the centre of the upper surface or at each side—a small bistoury, or, what is better, a pair of scissors will do this, and the operation will be trifling and almost bloodless. A stitch or two may be necessary at the angle of each nick, to prevent the reunion of their raw surfaces, or the same result may be secured by keeping the prepuce retracted, but at the risk of a temporary paraphymosis arising. The extra skin, which Mr. Erichsen thinks so much in the way, becomes inverted and supplements the deficiencies of the mucous membrane.

For phymosis, the result or concomitant of ulcers of the prepuce, the removal of an oblique ring may be required; but even in these cases we shall do well to keep as clear of the frenum as possible.

*Stricture of the Urethra.*—There has been but little added to Hunter's opinion of the ordinary locality of stricture, viz.:—" Every part of the urethra is not equally subject to stricture; for there appears to be one part which is more liable to them than the whole of the urethra besides, namely, about the bulbous portion. We find them, moreover, sometimes on this side of the bulb, but very seldom beyond it. I never saw a stricture in that part of the urethra which passes through the prostate gland." Mr. Thompson[a] divides the urethra into three regions, excluding the prostatic portion, in which no true stricture has ever been found upon *post mortem* examination. These regions are :—First, from the posterior boundary of the membranous portion $1\frac{1}{4}$ inches forward; second, the centre of the spongy portion; third, from the external orifice backwards for $2\frac{1}{2}$ inches. Out of 320 strictures 215 occurred in region one, 51 in region two, 54 in region three. The most common point of all was the junction of the membranous and spongy portions, next the anterior boundary of region one; while, between these two points six examples of stricture are met with for one behind the junction. Mr. Smith's statistics corroborate these. Stricture in the prostate is affirmed by Ricord and Leroy-d'Etiolles; but the museums of London, Edinburgh, and Paris present no example of it. Narrowing of the canal by the pressure of enlarged prostate no doubt occurs frequently, but this must be distinguished from true stricture. In the Museum of the Meath Hospital there is an example of what is generally, but erroneously, termed bridle stricture, situated in the prostatic portion. It is one of those small fibrous bands which stretch across the canal from side to side, and which owe their existence to an elongation of a morsel of lymph which has been effused on the surface of the urethra, and has become organised after acquiring an attachment to the opposite side of the canal; or, as Mr. Thompson suggests, to the perforation of a follicle by an instrument. The true bridle stricture of Sir Charles Bell is a fold of thickened mucous membrane, of crescentic form,

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[a] Stricture of the Urethra. Jacksonian Prize, 1852.

partially obstructing the urethra by running half way across it, or obliquely; sometimes two or three such partial strictures coalesce, making the floor or sides of the canal irregular and rough, and, as it were, flattened. The other is scarcely a stricture, but either a free band of lymph or a short false passage.

*Perineal Section.*—About 10 years ago there was a hot controversy upon this subject. This has now died away, mainly owing to a better definition of terms, and to a more perfect comprehension of proper principles of action. We are in a great measure indebted to Mr. Henry Thompson for this result. Mr. Syme, it will be remembered, contended that such a thing as impermeable stricture did not exist. By many he was misunderstood as denying the existence of obliterated urethra. His assertion went no further than to declare, that in every case in which urine could make its way from the bladder through the urethra, a catheter could be got into the bladder by time and patience. This statement of Mr. Syme's coincides with Mr. Liston's experience, and is not contradicted by that of other surgeons. It does not follow, however, that cutting operations may not be needed for the immediate relief of a distended bladder, or for the cure of a contractile stricture. The latter is the condition which Mr. Syme proposed to remedy by " external division." Prior to him the rule had been that if a stricture were permeable by instruments external division is contra-indicated. Mr. Syme proposes to reverse the rule, namely—" permeability is an indispensable pre-requisite to the performance of external division." He found that many strictures were so callous, and had such an inveterate tendency to contract, that within a few hours after dilatation they were as narrow as ever. He proposed to divide these by an incision, carried from behind the stricture forwards to the sound part of the urethra. His narrow grooved staff, with handle of full size, down to the commencement of the curve, is well known. By a careful use of this staff the extent of the stricture anteriorly is readily ascertained, and its complete division secured. A new plastic material unites the divided surfaces, and is capable of being stretched by the use of bougies so as to make future contraction of great rarity.

Other surgeons, prior to Mr. Syme, had divided strictures by cutting down upon the point of a staff passed as far as the stricture, and then cutting through it backwards towards the bladder, either with no further guide, or by the assistance of small grooved directors insinuated through the stricture from the wound. To this operation the name of " perineal section" is limited. To Mr. Syme we are indebted for the operation of " external division," by which the urethra is opened behind the stricture, upon a grooved staff, and the stricture divided by a cut forwards along the raphe. Mr. Bryant, in his *Clinical Surgery*, gives a very good *resumé* of the subject from a practical point of view; but, as is usual with him, with no reference to authorities. Few years pass by without some surgeon

devising an instrument for dividing stricture by concealed knives or scarificators introduced into the urethra. This internal division of stricture has never had much favour in this country, and the instruments, with the exception of Stafford's, are almost forgotten or unknown. A more dangerous mode of treatment can scarcely be conceived; and it is no matter of surprise to find M. Nelaton state that in more than half the number of incisions performed in Paris there is hemorrhage, and often to an alarming amount. Dr. James Arnott[a] states, that internal incision has often proved fatal from hemorrhage, infiltration of urine, and pyemia. He has also forcibly pointed out the impossibility of limiting the incision to the stricture, if it be made by an instrument which is either pushed backwards or drawn forwards; and he has striven to obviate all these dangers and difficulties by an instrument which shall cut by direct pressure upon the previously measured stricture.

*The Splitting of Unyielding Strictures*, by a dilator, has been largely practised by Mr. Holt, of Westminster Hospital, and apparently with great success.

The infiltration of urine and abscess which would naturally be supposed to follow from such a proceeding do not do so; and this is the more extraordinary as it is generally the floor of the urethra that gives way. This plan of treatment is on its trial. The instrument consists of the bivalve staff invented by Perréve, of Paris, with rods of various sizes, which are run down between the blades, so that the stricture is suddenly distended by an irresistible force, and is ruptured accordingly. If the operation be successful it has the merit of being rapidly so; and the cure is said to be permanent. Mr. Holt also uses this instrument for dilating strictures in the ordinary and more gradual manner, which is in general acceptance with surgeons. Its principle of action in this mode of application is identical with Mr. Hutton's railroad catheter, and Mr. Wakley's modification of the same.

Mr. Heath, of the West London Hospital, has corroborated Mr. Holt's treatment in a paper in the *Lancet*.[b]

*In Lithotomy*—various improvements have been effected. First, in the mode of securing the patient. If the chloroform is to be used, the old plan of fastening the hands to the feet must be given up, as the chest is thereby dangerously compressed, and respiration impeded. Though no death may hitherto have taken place from neglect or ignorance of this matter, yet it is so very easy to understand that such might occur that it is necessary to draw attention here to the point, though so very self-evident. In the operation we find *Buchanan* using a *rectangular staff*, and making his incision in the outer parts in a rectangular form, while the internal incision turns out to be identical with that of the ordinary

[a] Medical Times and Gazette, February, 1861.
[b] Lancet, August 31, 1861.

incision into the bladder and prostate in the lateral operation. *Allarton*[a] *has revived the Marian operation (en boutonnière),* and has a host of adherents.[b] He pushes the point of his knife into the central raphe of the perineum, in front of the anus, with his left fore-finger in the rectum and the back of the knife towards the anus; by depressing the curve of the staff towards the rectum, he opens the membranous portion of the urethra, and then gets a probe into the bladder. The staff is then withdrawn, and the finger follows the probe into the wound, and the prostatic portion of the urethra is now gradually dilated to the needful amount. This operation is essentially the right thing for small stones, and even for those of larger size it is not unsuitable, as the use of the lithotrite can readily be combined with it. In children also, whose prostate is small, it is a safer operation than lateral lithotomy. For the removal of foreign bodies in the bladder or posterior part of urethra it is also invaluable. I had occasion to perform such an operation in the year 1853; and from experiencing its facility and safety, I recommended its adoption for the extraction of foreign bodies from the bladder. Its applicability for stone became also evident to me at the same time; but I did not wish to put it forward on theoretical grounds; and, before I had an opportunity of testing it, Mr. Allarton anticipated me.[c] The main objection made to median lithotomy is that it substitutes dilatation and laceration of the prostate for incision. This, however, is an error. The lateral, or even bilateral incision of the prostate gives an aperture much too small for the extraction of an average calculus enclosed in the blades of a forceps; by the force required to extract it the prostate is more or less lacerated. No doubt the prostatic tissues are elastic, and yield to some extent, but not enough to avoid laceration in most cases. Now it is manifest that the laceration or distension which springs from a central wound in the gland will be less liable to extend beyond the limits of the gland than that which springs from a wound reaching almost up to the verge of the gland. There can be no doubt that most of the deaths in lateral lithotomy (which amount to 20 per cent. of cases operated on) are due to the wound extending, either primarily or by subsequent dilatation, beyond the limits of the capsule of the gland. Besides, it is found that separation of the fibres of the gland to the necessary amount can be effected without laceration of the mucous membrane, and that the highly dangerous infiltration of urine is thereby avoided. Mr. Allarton does not give chloroform, as the voluntary expulsive power of the bladder is most useful in the removal of the stone. Many of his patients were up and

[a] Lithotomy Simplified.

[b] Teale, of Leeds, &c. Ward, Lancet, June, 1860. Hall, Lancet, September, 1860. Hinton, Association Journal, April, 1855.

[c] Dr. King, of Hull, Edinburgh Medical Journal, January, 1857. Dublin Quarterly Journal, Vol. xx.

about on the day after the operation; and he has enjoyed singular success as regards freedom from mortality. Even for large stones a modification of the operation is suitable. Mr. Lloyd, of St. Bartholomew's, has found that no inconvenience arises from extending the incision into the rectum. The clean wound of the sphincter heals readily by first intention; and there is no danger of recto-vesial fistula, as in Vacca and Sanson's recto-vesical operation, inasmuch as the neck of the bladder is not cut.

The following statistics have been furnished to me by Mr. Allarton, with great kindness, and may be relied upon as absolutely correct:—

Total number of cases 154; total deaths 14; average 1 in 11.

PARTICULARISED CASES, or those in which the age of patient and size of stone are given.

| Age of Patients | No. of Cases | Deaths | Average |
|---|---|---|---|
| 10 and under, | 56 | 2 | 1 in 28 |
| 11 up to 20, | 16 | 1 | 1 in 16 |
| 21 up to 30, | 10 | No. | |
| 31 up to 40, | 6 | No. | |
| 41 up to 50, | 6 | 2 | 1 in  3 |
| 51 up to 60, | 13 | 1 | 1 in 13 |
| 61 up to 70, | 26 | 7 | 1 in  4 |
| 71 and upwards, | 6 | No. | |
| | 139 | 13 | |

Thus leaving 15 cases not particularised, and 1 death to them.

Of these deaths, one was the case of Mr. Erichsen, at the University College Hospital, a case which was doomed, no matter what the operation. Another case died of *diphtheria* a considerable time after the operation (17 days).

Altogether the results are very good, since they are fair average cases, not done by any one celebrated or successful operator, but by 42 different operators, many operating for the first time.

There was a controversy, in the year 1856, as *to the mode in which Liston held his knife* in cutting for the stone. Mr. Ferguson affirmed that he had held it underhand, and that the delineations in Miller's, Pirrie's, and Erichsen's Surgery were erroneous. Mr. Syme took the opposite view, and showed the danger of plunging into the pelvic viscera a knife with the fore-finger held on its back. Mr. Erichsen and others took a middle course, and asserted that Mr. Liston changed the position of the knife according to circumstances—in the first incision underhand, when striking the staff overhand. Whether this be correct as regards Mr. Liston may be a matter of opinion. It may also be a matter of indifference how the knife is held in the first incision, although it will be more graceful to

hold it underhand; but in striking the staff, if the surgeon would avoid the too common error of striking too far forward, he must hold his knife as a pen, but with the back of the fingers facing upwards; depressing his wrist to the utmost, he must strike upwards (anatomically speaking) from the posterior angle of his wound. In executing this manœuvre the extensor muscles are put upon an almost painful stretch in order to depress the wrist, and at the same time to elevate the points of the fingers. To strike the staff with the knife held underhand is difficult and uncertain; the point of the knife will be advanced obliquely if great care be not taken; while with the knife held as a pen, and steadied between the thumb and first two fingers, with the handle lying between the root of the thumb and fore-finger, as the feathered end of the pen does in writing, the natural direction imparted to it in the movement is straightforward, with a slight upward tendency as regards the operators, and as regards the patient it is directly towards the membranous portion of the urethra. If made from the posterior angle of an incision which extends—as the first incision for lateral lithotomy should do—as far behind the anus as in front of it. Mr. Erichsen's view, and that of Mr. Syme, approach theoretical accuracy more nearly than Mr. Ferguson; but none of the pictorial representations in the books are to be relied on. None of them give the position above described; and in all the fore-finger is much too far from the point of the knife. No doubt each operator will naturally hold the knife as is most convenient to himself; but those who have to form their hands will find the above method most advantageous.

*Some valuable statistics of lithotomy* are given from the Norfolk Hospital,[a] where for upwards of 80 years a careful record of these cases has been kept:—Of 863 cases of stone operated on, 755 recovered, 108 died, or 1 in 8. The operations performed were:—

Lateral,............... 803; Recoveries, 698; Deaths, 105; or 1 in 7·65
Dilatation (females), 41    „    39    „    2 or 1 in 20
Lithotrity, ............ 11    „    11
Median Lithotomy... 8    „    7    „    1 or 1 in 8

All the calculi are preserved and carefully tabulated, to the number of 982, besides 542 presented from various quarters.

*For Removal of Stone or Foreign Body from the Bladder of the Female* Mr. Syme[b] gives a good proceeding. He dilates the urethra, under chloroform, by a succession of bougies, until the point of the finger reaches the neck of the bladder, where, feeling the tense resisting fibres situated there, he makes a very slight incision, hardly more extensive than the blade of a narrow straight bistoury. The finger is thus enabled to enter the bladder, and the foreign body can be extracted by forceps, scoop, or hook, according to its nature. This combination of dilatation and cutting is

[a] Lancet, September 1, 1860.
[b] Observations in Clinical Surgery, 1861.

a judicious improvement on the use of either alone, inasmuch as it is not followed by incontinence, the small wound readily healing, and the stretched but not lacerated fibres quickly recovering their tone.

*Abscess of the Prostate.*—Mr. Hamilton[a] gives us a good diagnostic mark in cases of this kind, where, from the irritability, pain, and frequent calls to make water, the disease might be mistaken for inflammation of the bladder. In both cases the urine may contain much pus, and be turbid, but in abscess of the prostate the urine is acid, and remains so for some time, while in catarrh of the bladder it is alkaline, and rapidly putrifies.

The same writer has more than once drawn attention to the connexion between tubercular disease of the testicle and the "pustulo-crustaceous eruptions" of advanced syphilis.

*Cystic Disease of the Testis.*[b]— Attention has been drawn to the not infrequent confusion of cystic disease of the testis in an advanced stage, with encephaloid cancer of that organ. The particular form of the disease liable to be confounded with cancer is that in which the cysts are filled with a fibrinous material of a brownish-yellow colour, and pultaceous consistence. More than half of the specimens labelled as encephaloid of the testis in the Museum of the Dublin College of Surgeons are of this comparatively innocent nature; and the history of such of them as can be collected from the catalogue and elsewhere corroborates this view. The structure of the organ seems to favour the development of cysts; they are undoubtedly formed as a result of inflammatory action in the tubuli seminiferi which cuts off portions of the tubes by adhesion of their walls, or blocks them up by effusions of blood or lymph. The tubular structure and high vascularity of the organ makes it subject to the acute forms of cancer (encephaloid and melanosis), and not to schirrus. Genuine schirrus of the testis is, as far as my observation goes, an unknown affection.

*Operations for the Cure of Varicocele and Varicose Veins* are at present in great repute in France and England. The simplest and least dangerous of these are Vidal de Casis', Lee's, Erichsen's, Startin's, Ricord's, and Tufnell's methods.

Vidal inserts a pin behind the veins, and a wire in front of them, but through the same apertures in the skin; the wire is passed through holes in either end of the pin, and the two being twisted, the veins are compressed and gradually cut through.

Lee[c] passes two needles under the veins, and applies the twisted suture for a few days, until the vein is filled with a coagulum between the sutures; he then divides the vein subcutaneously.

[a] Dublin Quarterly Journal, May, 1851.
[b] M. H. Collis, Dublin Quarterly Journal, Vol. xxx.
[c] Medical Times and Gazette, January, 1853, &c.

Erichsen[a] substitutes, for Vidal's bar and wire, a simple loop of wire, which he gradually twists until it cuts its way out.

Startin[b] uses what he terms a bar-needle and clasp, which are convenient for many operations besides those on varicose veins. The bar-needle has a straight shaft and a curved extremity; the latter enables the operator to pass it readily under the vein, the former enables it to compress the vein when passed through. The clamp is a piece of wire with a loop at either end, which acts as the thread in the figure of eight suture.

Ricord makes use of two loops of hempen thread which are passed in opposite directions—one over and the other under the veins; the ends of each ligature are then passed through the loop of the other ligature, and drawn tight.

Mr. Redfern Davies[c] and Mr. Tufnell[d] substitute wire loops for thread; and the latter surgeon adds what he calls "retracting guides." These are simply threads of wire which are attached to each loop, and which enable the surgeon to lessen his compression of the vein whenever he pleases, or to remove the ligature entirely.

Mr. Davies found it impossible to remove the wire ligatures, in one instance, and was obliged to cut them close off, and leave them in the man's scrotum, where they appear to have permanently remained without the patient being incommoded by, or even conscious of, their presence.

All these modifications of metallic ligature are preferable to incision, excision, or caustic, though none of them are free from danger. In operations on varicose veins in the leg, it is advisable to place a pad on the vein above and below the point operated on, so that blood may not lodge there. There is no greater cause of troublesome and dangerous phlebitis than the presence of coagula in the veins. The danger may be reduced materially by the use of compresses; but in no case can operations on veins be considered other than uncertain and dangerous. In varicocele the use of elastic compresses and suspensories, cold douching early and late, and abstinence from the general exciting cause will cure many bad cases, and that with a surprising rapidity. The use of bromide of potassium (if it can be obtained pure) as an antaphrodisiac, in combination with iron, if necessary, is a useful adjunct; and everything should be tried before risking the patient's life by operation.

If the mortality were not more than one per cent. we should not be justified in letting our patient run even that small risk until all other means had failed. In varicose veins of the leg, the most perfect obliteration will not always cure the ulcers which have called for the operation;

[a] British Medical Journal, February, 1860.
[b] Medical Times and Gazette, May, 1860.
[c] Lancet, July, 20, 1861.
[d] Dublin Quarterly Journal, November, 1861.

and if we knew but all, relapses will be found to occur after ligature of the spermatic veins, not to speak of the possible atrophy of the testis, for which our patient would not thank us. For the leg, a broad band of vulcanized India rubber tightly encircling the limb below the knee, as recommended by Professor Hargrave, will sometimes effectually compress the superficial veins, and drive the blood into the deeper channels, especially in thin subjects, and the plan is unattended with risk, and may fairly claim a trial.

*For the Radical Cure of Hydrocele* we have had two suggestions which are not improvements upon Sir Ranald Martin's now well established treatment. The one by Mr. Lloyd consists in the introduction of a grain of the red oxide of mercury into the cavity of the tunica vaginalis upon the point of a probe. Possibly in a case which resists injection of iodine this severer method might succeed. Cases, however, in which relapse follows injection of iodine, are very rare, and may generally be cured by a repetition of the injection. Among many hundred cases which I have seen in various places, I have only once known the first injection of iodine to fail; in this instance success followed on the third trial.

An attempt has been made to revive the old method by seton,[a] only substituting iron[b] or silver[c] wire for thread; this, however, not only is uncertain of success, but has been followed by suppuration and other mischief.[d] It should also not be forgotten that infiltration of the cellular tissue of the scrotum (which is apt to occur upon acupuncture, or the use of a seton), is at times a fatal occurrence. For these reasons these methods cannot be accepted as improvements in the treatment of hydrocele. In his *Observations in Clinical Surgery* Mr. Syme expresses disapproval of the wire seton.

### ANEURISM.

*The Treatment of Aneurism by Compression*, justly termed the Dublin method, has attained a settled position in surgery, and needs no special notice at the present date. The names of Hutton, Bellingham, Tufnell, and Carte in connexion with the origin, the pathology, the literature, and the mechanism of this mode of cure, are familiar to us as household words. Few arteries will now be tied for external aneurism until compression has been found unsuccessful. Even in places where the most unreasoning opposition was given to it, recourse is now had to it, at least occasionally, and once fairly tested it will be sure to find favour. Mr. Erichsen[e] gives the following statistics as the result of the experience of London surgeons :—

[a] Chauliac, 14th century.
[b] Young and Simpson of Edinburgh.     [c] Erichsen.
[d] Davidson, of Lincoln.
[e] Cooper's Surgical Dictionary, 8th Edition.

In compression the failures were as 1 to 5·3, deaths as 1 to 16. In ligature the failures were as 1 to 3, the deaths as 1 to 4 ; this is exclusive of partial gangrene, secondary hemorrhage, and erysipelas, which frequently resulted from ligature.

For the cure of aneurisms which are not amenable to compression or ligature, other measures are suggested in the form of galvano-puncture, injection of perchloride of iron, and manipulation. The formation of an eschar by chloride of zinc paste, applied over the sac, has been successful in the hands of Bonnet, of Lyons, in a case of subclavian aneurism. Galvano puncture, first introduced by Mr. Phillips, in 1832, has been revived by Mr. Bonnet. It is a very painful process, and withal uncertain, not to say dangerous, though less so than M. Pravas' injection of perchloride of iron, which is by no means to be considered in the light of an improvement. There remains the manipulation of the sac, by which the operator endeavours to loosen some of the softer clots in the aneurism, in order that they may be driven into the distal portion of the injured artery, and by blocking up the current, lead to a consolidation of the tumour. This method, due to the inventive genius of Fergusson, is mainly applicable to such tumours as lie at the root of the neck, and which leave no room for pressure or ligature on the cardiac side.

Mr. Ernest Hart,[a] surgeon to the West London Hospital, has ingeniously combined flexion of the limb with pressure ; this improvement has been successfully followed by Mr. Shaw,[b] of the Middlesex Hospital, and by Mr. Oliver Pemberton,[c] of Birmingham. The same method has been adopted for the checking of hemorrhage from wounds of the palmar arch. The fingers are flexed upon the palm, and the fore-arm upon the arm, and retained thus by bandages. I have tried flexion in popliteal aneurism, but without success ; nevertheless I have a high opinion of its value, and believe it should be added to compression where the latter is not sufficient alone.

*Of Operations for Ligature of Arteries* we have a novelty in the late Professor Porter's[d] method for ligature of the common femoral. He made a transverse incision half an inch below Poupart's ligament of about four inches long. In thin persons the artery is at once exposed, lying by itself, and it can be secured quickly and bloodlessly, without fear of injury to the vein. The objections to this operation, which will naturally occur, are the injury to the lymphatic vessels, and consequent tendency to erysipelas, the liability to gangrene from obstruction of so large a trunk as the common femoral, and the risk of secondary hemorrhage,

[a] Medico Chirurgical Society, Lancet, May 7, 1859.
[b] Medico Chirurgical Society, Lancet, May 7, 1859.
[e] Lancet, September 3, 1859.
[d] See a paper by his son, Mr. G. H. Porter, in the Dublin Quarterly Journal, Vol. xxx. ; also Power on the Arteries.

owing to the number of branches given off in close proximity to the seat of ligature. It is to be feared that these objections will prevent this very simple operation from meeting with popular acceptance, and will outweigh, with most people, the advantages which it undoubtedly possesses of leaving the vein at a distance, and unmolested by the ligature. In a case in which it was lately adopted, the patient died of secondary hemorrhage, owing to an accidental high bifurcation of the vessel; the profunda was given off half an inch below Poupart's ligament, immediately above the spot where the vessel was tied; so that in fact the femoral, and not the common femoral, was ligatured; in the lower part of the artery there was a perfect clot; in the upper, the merest fragment, which might even be due to *post mortem* coagulation. The operation however is still *sub judice*.

Some brilliant and daring operations by the old method of cutting into the sac and tying the artery at the bleeding point, have been recorded by Mr. Syme in his *Observations in Clinical Surgery*. One especially deserves notice for a novel expedient which rendered the operation possible, and which well displays the daring and coolness of that distinguished surgeon. The tumour was very large, and extended above the clavicle, so that ligature of the subclavian became impossible, and amputation at the shoulder-joint seemed at first the only resource. The rest must be told in the words of Mr. Syme :—" Before proceeding to this desperate remedy I felt desirous of ascertaining the state of matters in the axilla, and therefore proceeded in the following manner :—

" On the 1st of February, chloroform having been administered, I made an incision along the outer edge of the sterno-mastoid muscle, through the platysma myoides and fascia of the neck, so as to allow a finger to be pushed down to the situation where the subclavian artery issues from under the scalenus anticus and lies upon the first rib; I then opened the tumour, when a tremendous gush of blood shewed that the artery was not effectually compressed; but while I plugged the aperture with my hand, Mr. Lister who assisted me, by a slight movement of his finger, which had been thrust deeply under the upper edge of the tumour, and through the clots contained in it, at length succeeded in getting command of the vessel. I then laid the cavity freely open, and with both hands scooped out nearly seven pounds of coagulated blood, as was ascertained by measurement. The axillary artery appeared to have been torn across, and as the lower orifice still bled freely, I tied it in the first instance. I next cut through the lesser pectoral muscle, close to the clavicle, and holding the upper end of the vessel between my finger and thumb, passed an aneurism needle so as to apply a ligature about half an inch above the orifice. The extreme elevation of the clavicle, which rendered the artery so inaccessible from above, of course, facilitated this procedure from below."

All went on favourably; the ligature came away on the thirteenth day;

six weeks after the operation the man was dismissed cured. An equally daring operation on a gluteal aneurism will be found in the same book. These cases bring to mind an anecdote told of a distinguished French surgeon, which, whether true or not, exemplifies what may be done by coolness in the most dangerous emergencies. Having by accident opened the internal carotid, when operating in the region of the tonsil, he instantly checked the alarming arterial hemorrhage by compressing with one hand the carotid against the transverse process of the cervical vertebra, while with the other he coolly went through the steps of laying bare the vessel, and when he had accomplished this part of the operation, laying down his knife and taking up the needle he passed the ligature round the artery, never letting go his grip of the patient until the vessel was secured, and the patient's life safe, at least for that turn.

## TETANUS.

Professor Haughton has brought forward some cases in which nicotine appears to have acted as a remedial agent in this formidable affection. His reasonings were founded on the fact that nicotine is an antidote to strychnia; and regarding the physiological similarity of the action of strychnia and of tetanic spasms, he was led to conclude that the antidote for the former might counteract the latter. Cases in which it has been tried show that it has a marked control over spasms of the respiratory muscles. It is to be hoped that this remedy will be fairly tested both in traumatic and idiopathic tetanus.

## INJURIES OF THE HEAD.

The name of Mr. Prescott Hewett may well be associated with this subject, both in consequence of his painstaking course of lectures in the *Medical Times and Gazette*, and for his article in *Holmes' System of Surgery*. In the latter we have an admirable epitome of the subject, from which the following extract is made :—

*Depressed Fracture.*—" The principle of noninterference holds good in a comminuted fracture, even with depression of the fragments, provided there be no wound of the scalp and no symptoms. It is now an established rule in our metropolitan hospitals that simple fractures of the skull, with depression and without symptoms, are to be left alone. The depression may be so marked as to be easily detected; and yet so long as there are no symptoms all operative interference, of whatsoever kind, is carefully to be avoided. In such a case recovery may be as rapid and as uninterrupted as if there had been no depression of the bone." A caution, however, is to be given in such cases to the patient that serious results, from intra-cranial growths and otherwise, may result from this unrestored depression. The line of treatment for such fractures, complicated with wound, is different; as Sir A. Cooper and Brodie have shown, compound fractures, with loose or depressed fragments, lead to suppuration; and to

prevent the pus from spreading under the bone its removal is called for.— P. 118.

*Concussion.*—Mr. Hewett's experience and reasoning go against the occurrence of concussion of the brain, as a cause of death, without traces of injury in the brain substance. In all suspected cases the heart and spinal chord should be examined as well as the head—the first for rupture, the second for extravasation. Many of the recorded cases of sudden death from supposed concussion he resolves, by analogy, into one or other of these. He would also attribute cases in which partial paralysis and loss of memory occur after injury to some extravasation of blood, or to some local injury to the brain-substance, rather than to concussion. This cannot be looked upon as other than conjectural; and when we compare cases of undoubted concussion with these, we cannot fail to be struck with the very gradual manner in which the symptoms coincide and run into one another; the more so when we compare cases of what are very graphically styled MENTAL *concussion*, where the whole train of symptoms indicative of arrested or depressed action in the brain-substance follow on a mental shock. In such cases all the immediate symptoms of profound depression, inclusive of irregular or imperfect paralysis of all voluntary, and many involuntary muscular actions are followed up by copious phosphatic deposits in the urine, impairment or perversion of the memory, torpor of the intellectual faculties, &c., in a manner not to be confounded with the more local, and possibly more severe, manifestations of injury due to the presence of a coagulum, or the existence of a rent in the substance of the brain.

In accordance with the views of Dupuytren and M. Fano, and in opposition to Sanson and Boinet, he holds, that contusion of the brain has no symptoms special to itself, and that its existence may be inferred, but as yet cannot be proved during life. He thinks that many of the cases of partial paralysis and failure of memory, after injuries, are due to this cause, and not to concussion.

*Abscess in the Brain.*—Dr. Detmold[a] has, within the last few years, followed the example of Dupuytren in plunging a knife into the substance of the brain, in search of pus; his incisions were repeated on three occasions, and varied in depth from half an inch to one inch and a half, a probe being passed into the wound, and reaching to the lateral ventricle. Matter was found on two occasions; but, in spite of this, the man died after the third incision, seven weeks subsequent to the first, and more than three months after the compound comminuted fracture which necessitated the treatment.

### FRACTURES.

*Starched Bandage.*—That muscular action is the chief cause of displacement in fractures of the long bones is admitted as a general rule. The

[a] American Journal of Medical Science, No. 37.

necessary corollary to this rule is that efficient control of the muscles will mainly remedy such displacement. The era of extension and counter-extension as a means of counteracting, wearying, and paralysing muscular action, but not controlling it, seems to be passing away. Men are now alive to the impossibility of overcoming the disturbing power of the muscles by these means, and to the mischief of attempting to do so. There would appear, indeed, to have been always a struggle between those who used these violent measures and those who tried simply to leave nature to effect the needful repair, without further interference than was necessary to ensure perfect repose. But unfortunately, as in many other branches of medicine and surgery, the dogmas and theories of the schools prevailed to the exclusion of more simple and rational procedures. From the time of Hippocrates there have been practitioners in every civilised community who used their bandages smeared with white of egg and flour, their plaster moulds, their starch, or gum, or waxed apparatus as effectually as many of the modern supporters of the *appareil immobile*. But these men have been, as a rule, outside the pale of the profession, and the prejudices of cast prevailed to exclude from due consideration the principles which their practice involved. Witness the Protest of Fabricius ab Aquapendente against a slight modification of the method as proposed by some of his cotemporaries—" Nos autem principes medicinæ sequemur." Although casual mention is made of the immovable apparatus in the writings of Fabricius, as also in those of Paré, Wiseman, and others, yet it remained for quite modern times to introduce it into general recognition as an orthodox means of treatment, and to elicit the principles which are to guide its application and ensure its success. Belloste, in the last century, Larrey in the early part of the present, led the way; and the latter surgeon stamped it with his approval as the method *par excellence* for the treatment of fracture. It is to the late Baron Seutin, of Brussels, however, that we are mainly indebted for bringing into note the starched apparatus, and for showing how it may be applied at the earliest stage of fracture, not only without danger to the limb, but with a certainty of shortening the period of repair. To Erichsen,[a] Gamgee,[b] and others[c] is due the credit of popularising this mode of treatment in these countries.

The old theory of Duhamel and Dupuytren, by which it was supposed to be necessary that a certain quantity of provisional callus should be thrown out and ossified as " nature's splint," is shown to be unsound. The most rapidly and best consolidated fractures are those which have united by the first intention, without a particle of provisional callus, and the connexion between inefficient control of muscle and such superabundent effusions is undeniable. In such bones as the tibia, firm bony union between the

[a] Science and Art of Surgery.
[b] The Advantages of the Starched Apparatus.
[c] On the Union of Fractured Bone. Dublin Quarterly Journal, Vol. xix.

broken ends is attainable in four weeks, or even less, where there is only a thin layer of interposed lymph to organise and ossify; whereas, if a mass of ensheathing callus is thrown out, it will take at least six weeks before this thick and low-organised mass is even imperfectly ossified, and it is more than probable that the true uniting layer between the fragments does not commence to be ossified in such cases until the ensheathing callus is nearly perfected: hence, in these latter cases, weakness in the limb, and a tendency to œdema remain for a long time persistent; and when the patient goes about, there is a certain amount of risk of refracture. Other and more palpable advantages of the starched apparatus are the facility with which the patient can be moved about when the case is dry. Patients with comminuted fracture of both bones of the leg, for example, can not only be turned in bed freely, but may get up on crutches on the third or fourth day after the fracture: hence the muscular system is kept in tone, and the weakening effects of a prolonged confinement to bed are avoided; in many instances also the patient is able to attend to business after the first week, if his occupation be of a sedentary nature.

The mode of applying the starched apparatus in general favour is as follows :—

The limb is wrapped in cotton wool so high as the middle of the joint above the seat of fracture. For example : if the tibia be broken, the wool must extend half way up the thigh. The layer of wool must be thick, especially over the seat of fracture, and over the joints and bony prominences. Splints or porous pasteboard, well softened, and soaked or rubbed well with starch, are now placed at each side of the limb, and behind it, extending as high as the wool. In the example adduced the lateral splints are furnished with portions for the sides of the foot, while the posterior splint extends only to the hollow above the heel; in stout persons an anterior splint may be needed. A roller-bandage, well soaked in starch, is now applied evenly over the splints with sufficient tightness ; the splints are graduated in width, so as to allow an interval of half an inch at least between their margins. A second layer of bandage may be applied over the first, especially in large people, or in fracture of the thigh or humerus. Exposure to the air, or the application of hot sand-bags will dry the case in 24 or 36 hours.

This case should be applied as a rule as early as possible. If applied before effusion has taken place, it will modify and control it, without the possibility of exerting injurious pressure. The elasticity of the cotton admits of unavoidable swelling, and checks what would be excessive, and this without risk. If effusion has taken place, the same elastic pressure checks its increase, and promotes its absorption. The surgeon has always a sure criterion that his pressure is not interfering with sufficient circulation if he leave the nails uncovered, and observe the colour and movement of the blood underneath them. The feelings of the patient are not a

sufficient guide, as it is well known that gangrene of a limb has occurred without any complaint of pain being made; but, if cotton be used in sufficient quantities next the skin, strangulation cannot take place.   It makes a difference of at least 10 days in the patient's convalescence if the apparatus be delayed until effusion arises and subsides; the reparatory process is interfered with, delayed, and checked by every excess of action in the part.

This immediate application of the immovable apparatus is the peculiar feature and great improvement of modern practice.   Those who object to it are those who have seen mischief arise from its improper application, or who have rot been at the pains to understand its principles; none who have once tried the method, as it ought to be applied, will, as a rule, follow any other.   When the case is dry, which will be in 24 hours, or sooner, if hot sand bags are placed round it, it is to be slit up along the interval between two of the pasteboard splints; the surgeon can now examine each side of the limb by turning down the lateral halves of the case in succession, an assistant keeping the limb by firm and gentle pressure in contact with that half of the splint which is not at the moment turned down.   Complete inspection of the limb, without any disturbance of the fracture, is thus obtained.   Any irregularities can be redressed by some extra padding with cotton wool, and, as the limb shrinks in size, the case is pared to fit it.   An external bandage is applied to keep all in place, and as soon as all traces of effusion have disappeared, this outer layer may be starched, and the patient allowed to leave his bed.   In this way, in favourable cases, where the apparatus is applied early, a patient may be able to be up, and out walking on a crutch, with the limb in a sling, in three days after fracture.

Baron Suetin used dextrine as a readier material than starch; it has the advantage of drying more rapidly.   Plaster of Paris is also used to saturate porous bandages, and is still more remarkable for rapidly fixing the limb; in children, it has a manifest advantage.   White of egg and flour make a very firm mould and light, but in warm weather it is apt to become offensive.   As starch is a universal commodity, it will, perhaps, be the general favourite, though where choice can be had, it would not be selected before dextrine or gypsum.

Whether we apply the *appareil immobile*, or any other form of splint, our object must be to control the action of all muscles which have either origin from, or insertion into the fractured bone.   This gives us a rule, pointed out so long ago, at least, as by Pott, namely—that no apparatus is worth anything which does not control perfectly the articulation above and below the seat of fracture.

*Fracture of the Femur.*—Scarcely a year passes by without some ingenious surgeon modifying our fracture apparatus, and in general these alterations apply specially to the treatment of *fracture of the femur.*   It

were impossible, even if likely to be productive of good, to specify all that seems deserving of commendation in these mechanical appliances. In Hamilton on Fractures and Dislocations, a large collection of these will be found, to which may be added Dr. Gibbs' expanding splint, Winchester's jointed splint, Dr. Zachariah Johnson's, Dr. Bevan's, and Mr. Butcher's splints.

The young surgeon who feels within him the promptings of ambition to add to the *armamentarium chirurgarum*, will do well to study what it already contains, before expending his ingenuity in devising splints for fractured femur. Those who may find it expedient to employ extending and counter-extending force, will find the *accumulators* of great service. These are thick ropes of vulcanised India rubber, with rings at each extremity; when put on the stretch they exert a considerable and continuous force which may be available for the above purpose. Bauer's wire splints deserve favourable notice for lightness and cleanliness.

Mr. Hamilton has very carefully gone into the evidence in favour of bony union of simple intra-capsular fracture of the femur, and expresses himself against its occurrence. As has been done by Robert Smith before him, he resolves the supposed cases into mistakes of diagnosis at the time of injury, into impacted fractures, and into chronic rheumatic arthritis.

*Fracture of Patella.*—Le Gros Clarke suggests a splint with a circular or oval aperture in the centre, to correspond with the patella. Sanborn[a] applies a broad strap of adhesive plaster from the top of the thigh down to the middle of the leg, leaving at the knee a free loop; bandages are rolled over the entire limb, omitting the knee; a small tourniquet pad is placed above the upper fragment, and a turnstick inserted in the loop and twisted until the fragments come in contact. The only deficiency in the description of this plan, as given by Hamilton, consists in there being no means described for preventing the turnstick from untwisting, as we can scarcely suppose the adhesiveness of the plaster to suffice for this purpose; this mode might be superadded to the starched case; with the latter however, alone, admirable results may be secured.

Mr. Tufnell[b] details a most interesting case of fracture of both patellæ in the same individual; slipping while going up stairs she fractured one patella by muscular action, and falling in consequence, she struck the other against the steps and fractured it also.

*Hooks for Fractured Patella, and the Spike for Oblique Fracture of the Tibia,* which owe their origin to the ingenuity of Malgaigne, cannot be classed among improvements in surgery, and are only mentioned for the purpose of showing that the complete neglect which they have sustained at the hands of British and Irish surgeons has not been from ignorance of their existence, but from a well-founded dislike to such retrograde mechanisms.

[a] Mr. Hamilton, Op. cit.        [b] Dublin Medical Press.

The swinging cradles of Luke, Salter, and Gibb are real improvements conducive to the safety and comfort of the patient, and have come into general use in one form or other.

*Fracture of the Radius.*—The ingenuity of surgeons seems well nigh exhausted as regards this fracture; or perhaps the labours of Colles, Velpeau, R. Smith, and a host of others have so clearly elicited the anatomy of the fracture and the principles of its treatment that there is less room for perverse ingenuity. Mr. Gordon, of Belfast, has lately put forward a splint, the merit of which consists in using a wooden pad to fill up the concavity of the radius which ought to exist at the seat of fracture. In the last number of this journal a review of this appeared. The method is an ingenious modification of what is known at the Meath Hospital as Crampton's or Smyly's method. It remains to be seen if the substitution of a wooden for a soft pad is an improvement—if the splint is long enough to give support to the hand, and prevent displacement. On the latter point there is at least a suspicion of well-founded misgiving.

For patients of advanced years Nelaton's method by two splints, a short anterior and long pistol-shaped dorsal splint seems the favourite. For the majority of cases, one anterior splint, reaching from the elbow to the flexures of the fingers, and sloped off to correspond with them, is sufficient, provided the pad at the wrist be made and kept high enough to act as a fulcrum, and press against the displaced bone at the seat of fracture. If, for the first 10 days, the elbow be kept immovable, and the height o f the pad from time to time renewed as it becomes flattened, complete reduction of the displacement will be obtained and preserved until union commences. A light, moulded, splint of Spark's leather may then be applied for a fortnight longer; after which some motion of the fingers may be encouraged, and the apparatus gradually removed. This plan enables the patient to regain fair use of the hand much sooner than Nelaton's does. In the latter the tendons are much compressed and matted, and six months generally elapse before pronation and supination are restored. Good arms can be turned out either way; but the Crampton method has the advantage of putting the arm into the position which is naturally the most easy, whereas Nelaton's is a cramped and unnatural position.

*Statistics of Fracture.*—Mr. Bryant[a] gives us some painstaking and useful tables upon compound fracture, deduced from 302 cases treated in Guy's Hospital during the last twenty years. Some of his results are as follows:

Compound fr. of thigh, ... 5·6 per ct., of which 64·7 per ct. proved fatal.

| „ | leg, ...... 63·9 | „ | „ | 38·3 | „ |
| „ | arm,...... 11·5 | „ | „ | 11·4 | „ |
| „ | fore-arm, 18·8 | ·, | „ | 12·2 | „ |

Of the whole number 31·7 per cent. proved fatal.

[a] Medico-Chirurgical Transactions, Vol. xliv.

Of the causes of death, it would appear that in cases subjected to amputation pyemia is twice as fatal as in those treated without amputation, and that exhaustion is a more common cause of death. Delirium tremens and tetanus were causes of death more frequently in those not operated on, than in those subjected to amputation.

In compound fracture of the thigh, as may be expected, the deaths hold a large per centage. The majority demand amputation; in fact none but uncomminuted fractures in the young and healthy, or the rare case in which the comminuted fragments can be at once removed, have otherwise a chance of recovery, or of a useful limb.

### DISLOCATIONS.

Much that is new is not to be expected in either the etiology or treatment of dislocations. We find a determined effort to bring forward manipulation as a means of reduction, in preference to extension and counter-extension. The name of Dr. Reid, of New York, is prominently connected with a method which is briefly comprehended in the following direction, as applied to dislocation of the hip:—" Flex the leg upon the thigh; carry the thigh over the sound one, upwards over the pelvis as high as the umbilicus, then abduct and rotate it." A variety of means similar to these have been adopted from the earliest days. Even in Hippocrates a direction is given for cases that resist extension, to bend the limb at the joint and rotate; and in many writers since his time such directions are amplified and enforced. Dr. Markoe, of New York, adopts a similar method to Dr. Reid's, with the addition of slowly extending the limb, after it has been flexed and abducted. Mr. Cock and Mr. Birkett, among others, have followed Colombat's method, in which the patient stoops over a table, and the operator stands behind him. The principle, however, is the same in both—namely, to use the shaft of the femur as a lever, and so act upon the muscles which retain its head in its abnormal position with irresistible force. Much of the modern ease in reduction of dislocations is, however, due to chloroform.

### PLASTIC SURGERY.

*Cleft Palate.*—The preceding *decade* witnessed the rise of Messrs. Fergusson and Mason Warren's improvements in operations for cleft palate. The last 10 years have seen their suggestions carried out, and, perhaps, in some degree improved. For the division of the muscles which act upon the soft palate Mr. George Pollock has suggested a knife, slightly bent upon the flat, and with a double edge; with this he cuts the levator palati from before backwards; and although the incision is necessarily rather larger than Mr. Fergusson's, the surgeon has the advantage of seeing exactly where he is cutting, and runs no appreciable danger of wounding the carotid. Mr. Fergusson's rectangular knife has been

altered by making it probe-pointed, so as to avoid the above-mentioned risk, and to prevent the point from hanging in the muscles of the pharynx, as it was found liable to do during the spasmodic efforts of the patient at deglutition.[a]

Mr. P. C. Smyly has suggested and practised the division of the levator and tensor palati muscles, by means of a small sickle-shaped knife introduced through the nostril. As soon as the blade is passed back through the posterior nares, the operator turns the cutting edge downwards; he then places the tip of the fore finger of the disengaged hand against the hamular process, and drawing the knife forward, severs all the muscular structures which intervene between his finger and the edge of the knife; dissection will show that this incision will implicate the levator and tensor palati muscles.

Mr. L'Estrange, long ago suggested that much assistance could be obtained, in all stages of the operation, by passing a thread through the point of the divided uvula at each side, and using it as a forceps to hold and draw upon the velum, so as to make it tense for the paring knife, or for the insertion of the sutures. I have borne testimony to the value of this suggestion, and Mr. Pollock has since adopted it.

In the separation of the muco-fibrous covering from the bony vault much facility and rapidity of execution can now be attained by introducing the knife through the nostril, at the earlier steps of the operation, as suggested by Mr. P. C. Smyly. The length of the operation is much diminished, as the operator can see what he is about, and can work with more freedom and certainty. There has been some correspondence lately between Langenbeck and Mr. Hulke[b] on the subject of a claim which the former makes to priority in detaching the periosteum along with the mucous coverings of the bony vault. No doubt whatever Herr Langenbeck makes this claim in good faith; but there is also no doubt that Mr. George Pollock, of St. George's Hospital, detached the muco-fibrous covering of the palate with chisel-edged knives, in July, 1855. I assisted at the operation—having gone over to London for the purpose. And in the latter part of the same year I repeated the manœuvre on another patient in the Meath Hospital. Mr. Pollock and I discussed the question of danger to the bones if deprived of their periosteum, and we came to the conclusion that the anastomosis of the vessels through the bones, from the periosteum of one side to that of the other, was so free in this situation that there was no danger of exfoliation; and the result justified the opinion. From the success of Mason Warren's operations I am inclined to think that he also detached periosteum along with mucous membrane as early as the year 1843. This,

[a] See a paper on Cleft Palate, by Mr. M. H. Collis, Dublin Quarterly Journal, Vol. xxi., p. 277.

[b] Medical Times and Gazette, August and November, 1861.

however, is but surmise. What I state about Mr. Pollock is fact —*me ipso teste*. *For the insertion of sutures* much mechanical ingenuity has been wasted. Startin's tubular needle is the only improvement which need be noticed. I must say that I personally prefer Liston's needles to any other method of inserting sutures. With three of these differing in curve from each other, any man who chooses to educate his hands, can pass sutures better than with any other mechanical appliance. In fact, there need be no difficulty in planting a suture anywhere within view, and many a one I have inserted where I could only see the point of entrance.

*Vesico-vaginal Fistula.*—Upon the kindred subject of vaginal fistula there is good reason for congratulation. The introduction of the silver wire suture by Marion Sims, has enabled us to grapple successfully with what was one of the greatest opprobria of surgical art. It is not necessary to enumerate the host of ingenious plans which our transatlantic brethren delight in offering for our adoption. I believe we shall come in time to find that the majority of cases can be cured by simple vivifying of the edges, and close stitching with silver sutures, and that Marion Sims' metal bars, Bozeman's shield of lead, and other kindred appliances, will be of exceptional usefulness. I dare say my own favourite quilled suture of vulcanized India rubber will come into the same category, although it may seem to deserve a better fate, as having been the means of reviving the belief of our Dublin surgeons in the curability of the accident. In this branch of plastic surgery, we have no reason, in Dublin, to feel dissatisfied with the success of the past decade. There have been many operators, since my first case in the year 1855, and each has contributed his share of success, and has added to our practical experience of the various modes and positions of operating. Marion Sims' duck-billed speculum is of great, though not invariable, value. In some cases broad brass spatulæ will answer better, and in fact, most of my best cases were done with these. Mr. Hilliard of Glasgow, has made a quadrilateral dilating speculum, which expands the interior of the vagina to the utmost, and which has the advantage of being self-retaining. It is highly spoken of by Dr. J. B. Brown. Dr. Simpson of Edinburgh, has found iron wire to answer as well as silver, for the sutures. In my hands it has not done so, and the general feeling of the profession, both here and in London, is in favour of the more noble metal.[a]

*Ruptured Perineum, &c.*—Dr. J. B. Brown,[b] of London, has done much to perfect operations for the cure of ruptured perineum, vaginal cystocele and rectocele, and prolapse of the uterus. By a sufficiently extensive removal of the mucous membrane of the vagina, and by paring the ruptured edges he obtains a large extent of raw surface, and by the quilled suture these are kept in close apposition until union takes place ; a free

[a] Lancet, March, 1858.
[b] Surgical Diseases of Women.

division of the sphincter being added for the purpose of paralysing its action. The form and extent of the raw surface which he makes depend on the amount of laceration, and the seat and severity of the prolapse. The division of the sphincter is only necessary for ruptured perineum. In few words, the principle of his operation consists in obtaining, not so much a closure of the orifice of the vulva, as a narrowing of the vagina, and attention to this point explains the success, and the superiority of his proceeding over those of others.

*Hare Lip.*—Allan Duke, of Chichester, has revived the use of fine interrupted ligatures on the mucous surface, and there has been an attempt to revert to the older plan of quilled suture, which was the rule before the twisted suture was copied from the tailors. The deformity which remains after the best planned operation for hare lip, consists in the lip being both too thin, and too shallow at the point of union; this results from a gradual thinning of the cicatrix, and can only be obviated by making the lip, if possible, a little too thick and too deep at the time of operating. This may be effected by making the incision more curved than it usually is. The gap corresponds to, what ought to be in most faces, a curved and raised line; but the ordinary straight incision, by which the edges are vivified, necessarily leaves a straight cicatrix, and, generally, a depression where an elevation ought to be. This deformity might be remedied by hollowing out the edges with a narrow bladed knife, as they are being vivified, and the lip might be thickened by using the quilled suture.

It is a matter of surprise to find so intelligent an observer as Mr. Spencer Wells, putting forward, as his opinion, that simple hare lip is merely non-union of the median labial fissure;[a] the situation of the cleft is always to one side of the mesial line, and corresponds to one, or both, of the ridges which run from the nose to the free border of the lip.

A variety of methods have been proposed to increase the depth of the lip, and prevent the little tuck up, which almost invariably is observed at the point of the cicatrix. Malgaigne carries his incision down, at each side, towards, but not through, the free border of the lip, he then cuts off two-thirds of the little slips and turns down the remaining third of each, so as to form a projecting nipple along the free border. This can be trimmed afterwards if too exuberant. Langenbeck and Coste, of Marseilles, pare one side in the same manner as Malgaigne, and the other they simply pare, rounding off the free angle, so as to get a raw surface along the border of the lip, to which to apply the lower third of the slip of the opposite side, thus making the cicatrix vertical through the upper two-thirds, and oblique along the lower third of its extent. Sedillot used a similar manœuvre to that of Malgaigne, and I remember to have heard Mr. Smith, of the Leeds Infirmary, describe a similar proceeding as one which he had been in the habit of following for years.

[a] Surgical Dictionary, 8th Edition.

Most surgeons will now follow the conservative practice of Gensoul, in retaining the central bone in cases of double hare lip and fissured alveoli and palate; except in cases of extraordinary deformity it may be pushed back into its place with advantage. Mr. Butcher[a] has figured some bone nippers by which the necessary partial incisions into its pedicle can be effected.

In separating the lip from the alveolar process, Soupert [Nouveau procédé pour le Bec de liévre, Brussels, 1858],[b] is careful to preserve the labial frenum, as he imagines that in after life the lip loses much of its characteristic expression if the frenum be removed. The labial frenum proper should never be divided, but the adhesion of the outer border of the fissure to the alveolar mucous membrane should always be divided. Care should also be taken not to separate the fold of mucous membrane above its proper line of reflection from the gum to the lip, as a fistulous opening sometimes remains upwards to the nares, if this be done. Too extensive severing of these natural reflections of the membrane leads to the lip becoming too shallow at the very point where increased depth is required.

Some of Mr. Bryant's clinical notes on this subject are interesting. Of 47 cases, 30 occurred in boys, but 17 in girls, thus corroborating the general notion that the malformation is commoner in male than in female children.

21 were simple hare lip.

 3 complicated with fissured gum.

 2　　　　　,,　　　　　,,　　　hard palate.

17　　　　　,,　　　　　,,　　soft　do., and

 2 were double.

44 were operated on.

3 within a fortnight after birth, of whom one died.

7 were four or five weeks old; in two of whom the line of union gave way, but subsequently closed by granulation.

6 were operated on between 6th and 7th week successfully.

10 between 3rd and 6th month, with one failure.

 5　　,,　　6th and 12th, successfully.

13 after 1st year,　　　　　　　,,

These results are in favour of delaying the operation until about the sixth month. Earlier operations may succeed even in a majority of cases, but one or two failures from premature interference will more than justify the delay.

Mr. Butcher is in favour of early operation, justly considering that the success of this, as of many other operations, depends much on the care and skill of the surgeon, and on the health rather than on the age of the patient.

[a] Dublin Quarterly Journal, 29.
[b] Surgical Dictionary, p. 869, 8th Edition.

*Deformities resulting from Burns.*—Mr. Rynd[a] proposed and executed an operation for the remedy of these deformities, to which his name deserves to be attached. It consisted first, in making his incision beyond the margin of the injured skin, in parts that were perfectly sound; and secondly, in dissecting up along with the flap every portion of underlying fascia, or even muscle, which had been included in the original injury and which had undergone the contractile change which results from it. To Rynd's operation Butcher[b] has added a subcutaneous scoring of the flap and division of such bands as threw it into ridges. Mr. Barton[c] recommends that simple extension should first be tried, then subcutaneous section of unyielding bands, and if these were insufficient, the severer operation of dissecting up the flaps.

## TRACHEOTOMY.

For facilitating the opening of the trachea we have various forms of grooved hook proposed. Spencer Wells suggests the cassigna, or hook grooved on its convexity, Lawford on the concavity, and Churchill on the side. Marshall Hall suggested a common sharp pointed pair of scissors with which, in emergencies, to divide the integument, and by a plunge to enter the trachea, then by divaricating the blades, to allow the entrance of air.

In the *Journal de Medicine et Chirurgie* for March, 1856, we have an account of 57 cures through tracheotomy, in 264 *hopeless* cases of croup, by Guersent. Unfortunately in this country we are not able to produce anything like so favourable statistics. Whether the disease is different in type, or that they operate earlier in France, certain it is that the most successful operators here can produce few, if any, genuine recoveries in the later stages of croup by the operation of tracheotomy; and one can see good reason why it should be so, if the formation of the false membrane be from below upward, and not from above downwards; so that the lungs are hopelessly inflamed and blocked up before the trachea is affected.

Fock also states that he saved 10 cases out of 24 in the last stages of the disease.[d]

## ORTHOPEDIC SURGERY.

In *Orthopedic Surgery* we have a reaction against indiscriminate tenotomy. Mr. Adams[e] has shown that tendons contained in synovial

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[a] Dublin Quarterly Journal, Vol. xxii.
[b] Dublin Quarterly Journal, Vol. xxxiii.
[c] Dublin Quarterly Journal, Vol. xxxii.
[d] Deutsche Klinik, 1859.
[e] Adams on the Reparative Process in Human Tendons.

sheaths do not unite when divided, but that they form adhesions
to the sides of the sheath, and that the interval between their
ends is permanent; thus a considerable loss of power results. This
statement, as regards human tendons, coincides with the previous
experience of M. Bouvier on the tendons of animals, and is sup-
ported by Mr. Barwell,[a] who goes so far as to say that such muscles
as the tibialis posticus, and flexor longus digitorum, might as well be
struck by sudden and irremediable paralysis, as be subjected to the knife
of the tenotomist; and that the tibialis anticus is only a little better
circumstanced. The peronei also are similarly situated.

I have seen two very simple and efficient forms of splint for varus, one
a straight piece of flexible tin, covered with chamois leather, an inch and
quarter, or so, wide, and long enough to wind round the foot and extend
along the outside of the leg, well above the knee. This acts as an
external ligament or set of muscles, and when secured by a bandage it
can be bent to any required position, which it will retain, and thus
exercise any required amount of force, and in the direction that seems
most suitable to the surgeon. This simple splint was devised by Mr.
Wharton, of the Meath Hospital, and has been of great service in several
cases in which I have used it. Another very similar idea is embodied in
a straight splint of Mr. Adams,[b] which is made of tinned iron, and runs
down the outside of the leg from the knee, below the foot; it is slightly
hollowed to the shape of the leg, the upper end is firmly bandaged to the
knee and calf, and by this means a lever power is obtained, so that by
continuing the bandage down the limb, great force can be brought to bear
upon the inverted foot. There is not, however, the same power to bring
down the heel which can be exercised by Mr. Wharton's splint, or by
Mr. Colles' simple hoop-iron splint, described in the first number of the
*Dublin Hospital Reports*, but it is of great service in the later stages of
cure.

Of strange operations, Mayer's for genu valgum is the strangest; he
cut out a wedge-shaped piece from the inner side of each tibia, below the
tuberosity, and treating his wound as a compound fracture, succeeded in
obtaining for his patient a pair of straight legs! *Ce jeu ne vaut pas la
chandelle.*[c]

### MINOR SURGERY, INSTRUMENTS, &c.

*For Removing Carious Bone.*—Among hundreds of implements few sur-
pass the *osteotrite* of Mr. Marshall, and the *double or forceps-gouge* of Coxeter.
The former is an enlarged edition of the common mill-head used by
dentists; it is most efficient for clearing away all that is diseased in

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[a] Medico-Chirurgical Society Reports, in British Medical Journal, Dec. 7, 1861.
[b] Medical Times and Gazette, July, 1857.
[c] Heyfelder's Memoirs on Resections.

irregular cavities, while the gouge forceps is most efficient in removing projecting irregularities.

The *écraseur* invented by Chassaignac was, at first, to supersede all cutting instruments; and its admirers went so far as to invent an *osteoclast* to enable the surgeon to perform a bloodless amputation. But this first enthusiasm has died away, and it now remains a useful instrument for the removal of hemorrhoids or any small pedunculated tumours, especially those arising from mucous surfaces, with a caution against too free removal in the case of piles, as mechanical stricture of the anus has been the result in some cases.

The *drainage tubes* of the same author should also be mentioned as a useful modification of a very old method of treating chronic abscess.

The *serres-fines* of Vidal are not as much used as they might be for retaining the margins of wounds in contact. Probably the general introduction of metal sutures, for which we are indebted to Marion Sims, Simpson, and others, has somewhat superseded their use.

The *Acupressure Needles.*—With Professor Simpson's we are all tolerably familiar. They too would seem to have been accorded at first a too extensive applicability, and to have been used in cases where, to say the least, they were not wanted. It remains to be seen if they are destined to take any permanent place in the surgeon's armamentarium.

For *paracentesis thoracis*, Mr. C. R. Thompson, of Westerham,[a] has devised an excellent canula and trochar, by which the entrance of air into the pleura is rendered impossible. The canula is four inches long; near its middle a short silver tube of the same calibre is let in at right angles; to this side piece, a foot or so of India rubber tubing is to be attached, the end of which is to lie in a vessel of water, with which the tube is to be filled by the simple process of giving it a squeeze. The trochar, which accurately fits the canula, can only be withdrawn so far as to open the communication with the side tube. It will be seen that with such an instrument air cannot get into the pleura.

Of *Tourniquets* we have ample supply. Signoroni's clamp tourniquet, Salt's plain band of steel, Key's expanding tourniquet are all good in their way. For field purposes Signoroni's, with Archimedean screw at the hinge, is the most rapid and powerful. It can be applied, and the limb amputated in half the time that Petit's would take to adjust.

*Bandages.*—MM. Mayor and Rigal[b] have proposed to substitute handkerchiefs and napkins for roller bandages. Many of their adaptations are extremely neat. The old double handkerchief for fractured clavicle is an example of the system. Others for the groin, for supporting the breast, and as suspensories for the testicle are simple and satisfactory; but as usual the idea is run to distraction by its authors.

[a] Medical Times and Gazette, March, 1858.
[b] Goffres on Bandaging. 1854.

*Hypodermic Injection.*—The direct application of remedies by this means is a valuable addition to our resources, especially in neuralgias, and possibly in tetanus. The credit of originating this method is due to the late Mr. Rynd, who adopted it in the year 1844, and published an account of it in the *Medical Press* of the year 1845.[a] His instrument,[b] which is expensive, never came into general use, and Mr. Wood has obtained the credit of popularising the method. Mr. Rynd used a solution of morphia in creosote, in the proportion of 10 grains to a drachm, injecting from six to twelve drops, for sciatica along the sheath of the nerve, with excellent effect. Excellent results are obtained by superficial scarifications over the terminal branches of the affected nerves, and by painting the scratches with a solution of morphia in creosote and chloroform. This has been used by Dr. Jameson, of Mercer's Hospital, for many years.

*As a Styptic*, the perchloride of iron has come into favour; and its solution has been introduced, with some temporary benefit, into the sloughing and bleeding masses of fungating cancers. Of its use in aneurism mention has been elsewhere made.

*For Local Anesthesia*, ice has also been used, and also as a *styptic*. More was, perhaps, expected from it in both capacities by Dr. Arnott; but there is no doubt, on the one hand, that the steady application of cold is of great service in retarding the growth of the more acute tumours, and on the other, that its value as an anesthetic for operative purposes is limited to cases of minor importance, such as operations for onyxis or onychia.

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# TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.[c]

### SESSION 1861–62.

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#### THIRD MEETING, JANUARY 15TH, 1862.

##### (*Open to Visitors.*)

DR. CORRIGAN, President, in the Chair.

DR. JONATHAN OSBORNE read a paper on the mode of using a heated thermometer, which he proposed to call *The Animal-heat Thermometer, for the purpose of measuring the cooling power of the air on the human body.*[d]

[a] Dublin Medical Press, March 12, 1845.
[b] Figured in our August Number, 1861.
[c] These reports are supplied by Dr. B. G. Guinness, Secretary to the Association.
[d] See a paper on this subject at page 273.

Dr. Beatty read a paper

*On so-called Hydatids of the Uterus.*—He considered that the name was incorrect—that the disease was one, not of the uterus, but of the ovum, and of very rare occurrence. Notwithstanding many eminent opinions to the contrary, he was himself satisfied that the true hydatid is never found in the virgin uterus, but was solely due to impregnation. He considered it an enlarged and dropsical condition of the villi of the shaggy chorion; in fact, a vesicular degeneration of the ovum. He stated that the patient so suffering was peculiarly prone to hemorrhagic discharges from the uterus—indeed, that this was an invariable accompaniment of the disease; often reducing the system to the lowest ebb, and a most dangerous affection.

Dr. James F. Duncan read the following paper :—

*Case of Obstructive Disease of the Heart, probably resulting from Chronic Pneumonia, and inducing Apoplexy.*—Edward Fetherston, aged 38, a carpenter, a man of sober and well-conducted habits, had uniformly enjoyed excellent health up to the commencement of his present illness. With the exception of an attack of sciatica three years previously, he never had any other form of rheumatism, nor any affection referrible to the heart.

On the afternoon of Monday, February 10, 1862, when engaged in his ordinary work, he was suddenly seized with a queer sensation all over him, affecting the right side of his face in particular. His right hand dropped powerless at his side, and his speech became indistinct. Consciousness remained unaffected, and he did not fall.

He was removed to the Adelaide Hospital on the 11th, and, on examining him next day, the symptoms he presented were as follow :—His complexion was clear but pale, and almost anemic, giving the observer the idea that he had lived temperately, but was suffering from some form of hemorrhage. His speech was almost inarticulate from indistinctness, but intelligence and memory seemed unimpaired. There was imperfect paralysis on the right side; he could move his hand and leg, and grasp with his fingers, but with less power than on the left side. The mouth was slightly distorted, and the tongue divaricated sensibly to the right. There were no symptoms of fever; his skin was cool; his tongue moist, and tolerably clean; and the general functions unaffected. The urine was of ordinary amount: 1020 in specific gravity, and not albuminous.

Though I had no special reason, from the man's appearance or history, to suspect anything wrong with the heart, I proceeded to examine it, and was at once struck with the extreme irregularity of its motions and sounds. There was no unnatural dulness on percussion over the precordial space, but the impulse was remarkably weak: the sounds were feeble and confused. Over the greater extent of the heart's surface no murmur could

be detected, but the first sound had lost its natural character; it was shorter and more clicky than usual; and on the back of the chest, corresponding to about the inferior angle of the left scapula, where both sounds could be distinctly heard, they bore a close resemblance to that of the fetal heart in utero. An obscure and badly developed systolic bruit was audible over one small spot near the apex of the left ventricle, about an inch and a half below the mamma, and to the left. The radial pulse corresponded to the condition of the heart; it was quick, faint, and irregular, giving the impression that the calibre of the vessel was not adequately filled.

No dyspnea was observable, neither was the respiration accelerated, and the patient complained of no cough; but a careful examination of his chest discovered double pneumonia occupying the lower portion of each lung, indicated by dulness on percussion, obstructed respiration, and fine crepitus. The transmission of the cardiac sounds to the back, pointed to the same state as the cause of the phenomenon. On close inquiry the man admitted that he had a cough, and oppression of his breathing for about three weeks.

I think an interesting question arises in connexion with the symptoms just detailed—how far they stand related to each other, and what is the precise nature of that relation? Are the three sets of symptoms—namely, those referrible to the nervous system, to the heart, and to the lungs—altogether distinct from each other, and independent, or is one in any sense the cause of the other, and, if so, what is the chain of causation?

I confess that when I first commenced my examination of the patient's heart, knowing the intimate and frequent connexion subsisting between morbid states of the brain and of the great central organ of circulation, I was quite prepared to discover evidences of some disease existing there, although unsuspected by the patient himself. But I was certainly taken by surprise when I discovered, instead of the signs of regurgitation through the mitral and aortic orifices—which I believe to be the most common link in this chain—evidences which pointed rather to some obstruction to the current of the circulation. Hastily adopting, on the moment, the idea that this obstruction depended upon narrowing of the mitral orifice, I naturally inferred that the patient must have been suffering for a long period—years, perhaps—from cardiac disease; because such a degree of contraction as was here indicated was not likely to be produced, except after a long interval of suffering. But on questioning the patient, to ascertain the truth of this conjecture, neither his past history, nor the physical signs which he presented, corresponded with this hypothesis. He had never had palpitation, dyspnea, or pain; neither had he hemoptysis, enlargement of the right chambers of the organ, pulmonary congestion, nor any swelling of the great veins, all of which usually accompany narrowing of the mitral opening.

Rejecting, then, for these reasons, the idea that the attack of apoplexy

depended upon a chronic lesion of the heart, and that the pulmonary inflammation was a mere coincidence, I was led to look upon the case in a different point of view, and to regard the pneumonic seizure as the starting point of the entire series of the morbid actions; giving rise, in the first instance, to changes in the condition of the heart sufficient to interfere with the proper performance of its functions, and to the fit of apoplexy as the remote consequence of these changes. The mode in which these effects have been produced was, probably, the formation of a fibrinous coagulum within the left ventricle, interfering with the free action of the valves, and with the current of the blood in its passage through the chamber. After the formation of this coagulum there was, possibly, the detachment of some loosened portion, in the manner described by Dr. Kirkes, which, carried into the general circulation, became entangled in one of the cerebral vessels, and, by its mechanical interference with the nutrition and functions of the part, gave rise to the symptoms of apoplexy.

To this view of the case several objections will at once suggest themselves. In the first place, it will be considered extremely improbable that coagulation of the blood should occur in a healthy young man labouring under pneumonia; for, if it did, the occurrence, instead of being a rare phenomenon, which it undoubtedly is, should be one of the most common in the course of practice; and, secondly, the cerebral lesions described by Dr. Kirkes have been hitherto found only in connexion with endocarditis or warty growths upon the valves; whereas, in this instance, the physical signs have been different from those accompanying either of those pathological conditions.

In reference to the first of these objections, it is to be remarked that the attack of pneumonia under which the patient laboured, must have been of a low and chronic form. For three weeks, according to his own account, he had a slight cough, and a sense of oppression in his chest, yet it neither hurried his respiration nor produced any inconvenience sufficient to induce him to look for medical assistance; and when he came under observation in the hospital, though the lower portion of both lungs, posteriorly, was dull on percussion, yet the fineness of the crepitus, and the absence of bronchial respiration, showed that the inflammation was still in its first stage.

The chronic form which the inflammation assumed in Fetherstone's case, and which, doubtless, depended upon some peculiar condition of the constitution, appears to me to furnish some explanation of the phenomenon in question—assuming, for the moment, that the hypothesis we have laid down is the correct one. Two circumstances combine to favour the formation of a clot in a part so well fitted to receive it as the interior of the left ventricle: the one is the hyperinosed condition of the blood in the inflammatory state; and the other is the retardation of the current of the circulation, owing to the pulmonary obstruction and the impaired energy of the vital force.

That the blood does occasionally undergo coagulation during life is a fact too well established in pathology to admit of question. It is in the old and debilitated, shortly before death, that it has usually been observed, in whom the waning powers of life are insufficient to maintain the circulation in a way to prevent this effect taking place. I have met with more than one instance of late, which I had the opportunity of verifying by *post mortem* examination, and which, during life, presented physical signs bearing a close resemblance to those presented by the case under consideration. These were : weakness and irregularity in the heart's impulse, diminution in the volume of the pulse, feebleness in the first sound, and absence of any bruit.

With regard to the other objection, it may be said that the attention of practitioners has been too recently directed to this form of accident to enable us to say that it is only in the case of organised growths, detached from the internal membrane of the heart, that apoplexy can result. The general principle involved in Dr. Kirkes' cases applies to all cases of plugging of cerebral arteries, whatever be the nature of the obstructing medium ; and while a portion of coagulated fibrin may be less likely to lead to permanent disorganisation of the brain substance than warty growths of a denser structure, the immediate effects must be nearly the same.

Of course, in speaking of the case to which I have called attention, I am at present only adducing this idea as a probable conjecture ; for the opportunity of verifying the truth or falsehood of the opinion has as yet happily been withheld. Still, the continuance of the patient's life, or the removal of the paralytic symptoms, does not necessarily invalidate the theory put forward. Even Dr. Kirkes admits that the obstructions of which he treated were, possibly, not in all cases absolutely fatal, but that the recuperative or adaptive powers of nature may, perhaps, in some instances be capable either of absorbing the obstruction, or, by dilating the vessel, allow a sufficient quantity of the vital fluid to pass to the remote side of the vessel, and so provide for the future nutrition of the parts beyond.

The treatment I was led to adopt was principally directed to relieve the pulmonary inflammation, but was equally calculated to promote the activity of the absorbents generally. It did not differ materially from that usually employed for such a purpose. In addition to the local detraction of blood by leeches and cupping, there were used diffusible stimulants, and pills containing moderate doses of the blue mass, in combination with quinine and dried soda. The progress of the case has been hitherto satisfactory ; the paralytic symptoms are decidedly relieved ; he speaks nearly as distinctly as in health ; the appearance of the face is natural ; and the tongue is protruded straight. His chest is clearing up ; the dulness posteriorly is diminishing ; the heart is no longer audible below the left angle of the

scapula, or, if at all, very indistinctly, and the crepitus is gone, while air enters the pulmonary structure more freely. The condition of the organs of circulation is as yet but little changed. The impulse, though stronger, is weak; the beats irregular in number and in force; the sounds present somewhat the same character as they did at first. They are rather more developed, as if the heart's action were less interfered with. The systolic bruit is a little more distinct and prolonged. The patient's mouth is now sore; his strength has been sustained by wine and nourishment; and to-day he has been put upon a mixture of infusion of polygala with hydriodate and carbonate of potash.[a]

Before concluding, allow me to add a brief note of a case which I met with last year, and which appeared at the time to have been an instance of embolic detachment, although we were unable to satisfy our curiosity by a *post mortem* examination.

Julia Dunn, aged 19, a dressmaker, was admitted into the Adelaide Hospital, March 12, 1861. For two years previously she had been subject to palpitation of the heart, aggravated occasionally by the occurrence of general dropsy. She never suffered from rheumatic fever, and did not know to what the affection of the heart is to be attributed. The symptoms which she presented on admission were :—Palpitation, cough, with a sense of constriction, but no dyspnea. There was slight œdema of both ankles, with constant pain in the right one, increased at night. She was liable to frequent attacks of epistaxis, and complained of a swelling of some description in the left hypochondrium. She was a remarkably silent girl, seemed depressed in spirits, and had an anemic, unhealthy aspect. A well-marked pulsation was observable above the sternum, whether venous or arterial was not certain, but a venous murmur was distinctly audible over the internal jugular. Percussion in the cardiac regions showed the existence of greatly increased dulness, as well as at the base of both lungs posteriorly. Over the base of the heart a bruit was heard, with the second sound; at the apex a murmur attended both sounds.

The next day the sounds of the heart did not present the same character as they did the day before, from which circumstance we were led to predicate the existence of endocarditis in a slow but progressive form.

The day after (the 14th) the murmur was louder, and the pulsation over the sternum communicated a thrill to the finger placed over it. On the 17th the gums were tender, and a mercurial fetor was perceptible on the mouth. The pulsation over the sternum was less. She felt and looked better; some colour was returning to her cheek; her cough was gone, as

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[a] The patient continued to improve, but left the hospital on February 28th. At that time the changes in the condition of the heart indicated a material removal of the supposed mechanical obstruction to the current of the blood. The pulse became fuller, firmer, and less irregular; the impulse stronger; and the bellows murmur over the apex of the left ventricle more developed.

well as the pain in the right ankle. On the 18th there was still farther improvement; and on the 19th, at nine o'clock a.m., she told the nurse that she had had a very good night's sleep, and that she felt better than she had done since her admission. Shortly afterwards, when making my visit, I found her crying hysterically, and complaining of a pain in her head and in her stomach. I was led, by her appearance and manner, to think that she had been frightened by another patient, who was moaning in the ward. At 11 o'clock she had a kind of fit, working convulsively, so as to render restraint necessary. Every two or three seconds she would suddenly move her face forward, open her mouth to its widest extent, and spasmodically thrust out her tongue, accompanying the act by a prolonged pendulous moan. In tossing her arms about she would bring her hands to her head, and draw them forcibly across her face, uttering complaints about her head, as if suffering from pain. The violence of the fit subsided soon after the administration of an enema, when she remained quiet, but moaning, and rubbing her face with her hands. She appeared only partially conscious; for although when spoken to loudly she could still indicate her head, and mutter something about pain, she would immediately relapse into a lethargic condition—her eyes half closed, the pupils contracted to their smallest possible size, and perfectly unaffected by light. The pulse was peculiar, presenting a double impulse, followed by a single one, which was succeeded by a prolonged interval. There were occasionally complete intermissions, and again it would be regular, but very weak.

At 12 o'clock she was still able to point to her head, and mention something about pain; but this was the last time she spoke. Her breathing soon after became stertorous; at a quarter before two o'clock the same day her pupils were observed to become suddenly dilated to their fullest extent, and at the same instant the heart's action finally ceased.

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# PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.[a]

### TWENTY-FOURTH ANNUAL SESSION—1861-62.

### Dr. Banks, President.

*Intra-Capsular Fracture of the neck of the Femur.*—Dr. Edward Hamilton said that the specimen before the society was one of ordinary fracture of the neck of the thigh bone.

It was taken from a female aged, at least, eighty years. She was a charwoman by occupation, and was admitted into Steevens' Hospital in consequence of the effects of a fall. She slipped on a flag in a kitchen,

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[a] These reports are furnished by Dr. R. W. Smith, Secretary to the Society.

and fell with considerable violence to the ground, and was unable to raise herself. He saw her the morning after her admission, and she presented all the features, or most of the features, of intra-capsular fracture of the neck of the femur, tolerably well marked. The limb was half an inch short, and she was unable to raise her heel without the manœuvre so frequently adopted in such cases, of drawing it along the bed. He could not discover the least crepitus; the *nimia diligentia* was avoided, as they were not anxious to disturb her unnecessarily, and thinking that the diagnosis could be satisfactorily made without it. She was placed on an inclined plane of pillows, and things continued in the same state for some days. One of the most remarkable features about the case, was the small amount of suffering; in fact, she would not believe that the limb was broken; she said she was merely bruised, and that some of the sinews were started. In about the seventh day after her admission to the hospital, he observed a marked change in her appearance. It was evident that the flame of irritative fever had been lighted; her skin was hot; her pulse was fluttering, weak, and intermittent; but, notwithstanding all these constitutional disturbances, she complained of no pain in the region of the hip. She sank, however, in a day or two afterwards. The *post mortem* examination showed that their diagnosis had been tolerably correct; but, he should say, they were, to a certain extent shaken in their diagnosis, when they found her complaining of so little pain. There was a slight contusion on the hip, beneath which there was a small quantity of extravasated blood; the capsular ligament of the hip joint was uninjured, but swollen, as it contained fluid. On opening it a quantity of purulent serum escaped. There was no vascularity, and but little attempt at repair. The fracture seemed as if it had taken place after death. The clinical teaching of that case should impress on their minds what most of them knew very well—that there may be absence of crepitus in cases of fracture of the neck of the femur; secondly, that in persons of extreme age the suffering is very slight; and thirdly, that death arose from irritative fever.—*December* 14, 1861.

*Fibrous tumours of the Uterus.*—Dr. M'Clintock exhibited the uterus, with its appendages, and a part of the vagina, removed from a patient who died in the chronic ward of the Lying-in Hospital, some weeks before the expiration of his mastership of that institution. The specimen, by itself, as a piece of morbid anatomy, was one of considerable interest, and very instructive. It exhibited almost an epitome of the principal anatomical characters belonging to that common, but very important, disease—fibrous tumour of the uterus; and it presented the chief varieties, as to situation and structure, of this description of morbid growth. Tumours of this kind were described by Baillie under the name of *fleshy tubercle*; by Hooper they were called *cartilaginous tumours*; and by later

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pathogolists they have been variously designated as *fibrous tumours*; *fibroids*, and lastly, by M. Paul Broca, *hysteroma*.

On the upper and left side of the uterus were two large sub-peritoneal tumours; and there were others, in different stages of growth and development, protruding from the exterior surface of the organ. These tumours might be termed gregarious, for they rarely occurred singly; as many as fifteen or twenty were sometimes found in the same case, and in this instance, there were certainly seven; one of those which protruded from the left side of the fundus of the uterus was, so far as shape went, a veritable polypus, but covered with peritoneum, instead of mucous membrane. It was attached to the uterus by a small, flat, ribbon-like neck, and had a very white dense structure.

This tumour was in the first stage towards calcareous transformation, a spontaneous process of cure, depending in a great measure on diminished vitality. Attention has lately been drawn to the transplantation of fibrous tumours from the uterus to other parts of pelvis, and the way in which this occurrence took place was satisfactorily explained in a paper written on the subject by Dr. Turner of Edinburgh.

The tumour, in the case before the society, might be regarded as in a most favourable state for such transplantation, in consequence of the length and smallness of its pedicle. So far for the sub-peritoneal tumours. Another situation for fibrous tumour was in the substance of the uterus, and when so placed the uterus became enlarged in size and developed in structure; whereas the sub-peritoneal tumour exercised but little influence on the growth of the uterus, and caused scarcely any annoyance. In the present instance an interstitial tumour has produced a very great augmentation in the bulk of the uterus, with great thickening of its walls. The third position of the fibrous tumour, was where it protruded from the uterus into the vagina, forming a fibrous polypus, or pediculated submucous fibrous tumour.

There was on the table a magnificent example of such a polypus. We now come to the clinical history of this specimen. The patient was unmarried, and had been suffering from continued hemorrhage for five months before her admittance into hospital. On examining the state of the uterus, this large polypus was found to exist, and the patient was admitted for operation. The next morning, having made a more minute investigation, Dr. M·C. discovered that the woman was thin, haggard-looking, and very much anemiated, and altogether in a very unpromising state for an operation. The uterus was evidently much enlarged, there was a large tumour above and to the left of the pubes. It was clearly not a case of simple uncomplicated polypus. On further examination per vaginam, they observed a watery fetid discharge. On consideration of these circumstances it was decided that the case was not a suitable one for operation. Dr. Marion Sims, of New York, was at this time in Dublin,

and a very frequent visitor of the hospital. Dr. M'C. showed him the case, and told him that he hesitated to remove the polypus. Dr. Sims entirely concurred with him as to the inexpediency of the operation, and added that in his own hospital, if the operation were to be undertaken, he would be apprehensive of a fatal pyemia succeeding to it. This decision was come to on a Wednesday morning; and on the Friday morning she got a rigor, followed by vomiting, abdominal pain, and collapse, and she died in ten hours. A careful *post mortem* examination was made. There were traces of incipient peritonitis, and a good deal of fluid in the lower belly. A rupture of a cyst in the right ovary was detected, and the fluid, still remaining in the cyst, was the same in appearance as that found extravasated in the peritoneal cavity. If any operation had been performed her death would, no doubt, have been attributed to it; so that it was fortunate they had abstained from interference. The cause of death was most interesting and important.—*January* 11, 1862.

*Diabetes.*—Dr. MOORE said that the specimen which he was about to show was taken from a man who was admitted into Mercer's Hospital on the 14th of October last. The case was very closely watched, and was one of great interest. He would read the history of the case :—

Patrick Ryland, aged 43, a pensioner; had served 21 years in the 23rd Regiment, in many parts of the globe; and in 1858, after his return from India (where he had been laid up for three months with rheumatism) he was discharged. About the middle of March, 1861, he first felt cramps in his legs, and began to lose flesh. During the month of April he became more emaciated, his thirst immoderate, and his urine greatly increased in quantity. In June these symptoms were still more aggravated, and on the 12th of this month he was admitted into St. George's Hospital, under the care of Dr. Bence Jones. He came to Dublin in September, and was admitted into Mercer's Hospital on the 14th of October. On admission his symptoms were :—Extremely haggard, emaciated, anxious look; skin hot and dry; immoderate thirst; abnormally increased secretion of urine, of a pale straw colour. He complained of pain in his chest and down his limbs; of impaired vision, particularly the left eye; of extreme cutaneous sensibility, the slightest touch making him wince. The physical signs were :—Appreciable dulness under the right clavicle, and over both lungs posteriorly and inferiorly; feeble respiration, with a short, dry cough. His diet, on admission, consisted of one pound of bread, one pint of milk, and one egg; one pound of beefsteak, one quart of beef tea, one pint of milk in the evening; one quart of milk and lime-water during the 24 hours. The first 24 hours after his admission he passed 10 pints of urine. specific gravity 1046, having an acid reaction, and loaded with sugar, when tested with liquor potassæ. He was now allowed a pint of porter. The quantity, or specific gravity of the urine, did not materially vary till

the 18th, when, the patient having passed 13 pints in the previous 24 hours, with a specific gravity of 1040, Professor Haughton found the proportion of sugar present to be 7·98 grains to the pint—about 23½ ounces in the 24 hours. The specific gravity of the urine remained the same until the 28th, when it rose to 1050. On the 29th the patient passed 9 pints of urine, the specific gravity being 1043, and the proportion of sugar, according to Professor Haughton's calculation, was 7·00 grains to the pint. Things went on the same way for some time. The specific gravity of the urine was reduced to 1025. On the 11th of November his diet was changed, and he was allowed a considerable quantity of greens. On the 12th he only passed six pints of urine, the specific gravity being 1040. Although he was allowed to drink water *ad libitum*, it did not seem to affect the quantity of urine he passed. On the 13th seven pints of urine, with a specific gravity of 1040. His expectoration now became more copious, and was like treacle, and sweet to the taste. Nothing remarkable occurred until the 24th, when gargouillement became well marked under the right clavicle, and there was œdema of the extremities. On the 25th the specific gravity of the urine was 1030, and the quantity passed four pints. On the previous day it was 1040. On the 9th of December he passed five pints, and the specific gravity was 1046. There was evidence of the right lung breaking up. On the 10th he passed four pints; the specific gravity was 1016, and there was not any sugar. That was so staggering, that the patient, having been put sentry on his own urine, was much affected at being suspected of interfering with it. At this time he was suffering from pain in the side, and was unable to take a deep inspiration. On the 11th he passed four pints: specific gravity, 1030. On the 16th the specific gravity was again up to 1042, and Professor Haughton found that the sugar had fallen to 1·46 grains to the pint. On the 17th he passed three pints, and the specific gravity was 1017: no sugar. There was crepitus over the mammary region of the left side. On the 18th he passed six pints, and the specific gravity was 1036. On the 19th it was again up to 1042. On the 21st he passed six pints, and the specific gravity was 1006: no sugar. 22nd, it was 1032: sugar presented. 23rd, 1014: *no sugar.* From that day to the 3rd of January, when he died, there was *no* sugar. The *post mortem* examination disclosed no very striking appearances. The kidneys were slightly enlarged, as they are found in these cases. Hyperemia was extreme. They weighed three ounces over the average weight. The spleen was small, and there was nothing abnormal in the condition of the liver. The heart was comparatively small; it weighed over nine ounces. The right lung gave evidence of disease from an early stage, and was one mass of tubercle, which, in the upper and middle lobes, had run on to general breaking up. The left lung was studded with tubercles. He was induced to bring forward the case for various reasons, but more particularly on account of its intermitting character with regard to the disappearance

and reappearance of sugar. Cases have been brought forward in which the quantity of sugar gradually diminished before death, but he had not seen a case in which these intermissions occurred. The loss of vision, particularly of the left eye, did not pass unnoticed, Mr. Hildige having examined both eyes by means of oblique illumination, when not the slightest opacity of either lens or capsule could be detected. The retina of the left eye presented the following appearances:—The optic nerve was of a blood red colour at the point where the arteria centralis retina and vein enter it; near its circumference the colour was somewhat lighter, but it was marked here and there with spots of apoplectic exudation. Between the entrance of the optic nerve and the macula lutea, the retina presented a yellowish white appearance, resembling a parallelogram in shape. This extended about one-fourth of an inch above and below the optic nerve, following the course of the vessels, and ended abruptly in a somewhat serrated though well-defined margin. The macula lutea itself was but slightly changed in colour, and the remainder of the ground of the eye was normal; the field of vision was reduced to about one-eighth of its normal extent; so that when the eye was fixed on a certain point, and the hand moved round this point at a distance of about eight inches from it, it could not be discerned. Although the sight of the right eye was relatively unimpaired, still it was found, on examination, that the optic nerve of it also was much redder than natural, and feint greyish spots, resembling the first stage of sclerotico-choroiditis posterior, were observed here and there over the ground of the eye, particularly in the neighbourhood of the macula lutea, and following the course of the retinal vessels; however, the sight of it enabled the patient to read ordinary type without the aid of glasses.—*January* 11, 1862.

*Phthisis—Tubercular abscess finding exit through the intercostal space.*— Dr. HAYDEN said that the specimen he exhibited was taken from the body of an aged female who was admitted into the Mater Misericordiæ Hospital, on the 29th of November. She exhibited all the signs and symptoms of phthisis in an advanced stage, including, amongst the former, well marked gargouillement in the right infra-clavicular space. It was unnecessary to detail the symptoms. He observed, however, that there was more than ordinary cutaneous sensibility under the right clavicle; and she could scarcely endure the slightest contact of the stethoscope in this situation. Shortly afterwards, he remarked a tumour, measuring three inches by two, in the situation where the patient complained of tenderness; the tumour appeared when the patient coughed, and subsided immediately afterwards; and on manipulating it by pressing with the thumb between the third and fourth ribs, it did not appear as usual, when she coughed; it was emphysematous and resonant on percussion. A variety of means to allay the irritability were tried with-

out success; but repeated blistering was found to relieve her to a certain degree. She died on the evening of the 15th instant. He was disposed to regard the tumour as the result of the escape of tubercular abscess from the lung, perforating both layers of the pleura, and finding exit between the third and fourth ribs. He also supposed, from preceding observation, which it was very difficult to make, owing to the extreme emaciation of the patient, that the matter had found exit through one of the bronchial tubes. There was crepitus in the cavity when she coughed, and air passed freely through the opening from the lung into the abscess inflating it. A closer examination induced him to change this opinion, chiefly from the fact, that he was unable to discover the usual metallic phenomena. The result of the examination showed that his first impression was correct. Mr. Ryan, the resident assistant, removed from the thorax the integuments, subcutaneous tissue, and a portion of the second, third, fourth, and fifth ribs, with their corresponding cartilage, and the entire of the upper lobe of the lung. On raising the integuments with the muscles, he found his fingers in a large cavity, lined at the outer side by a dense membrane, as thick as leather. The ribs were denuded of periosteum, and carious on the surface, but there were grounds, he thought, for concluding that the abscess was not the result of caries commencing in the ribs. On closely examining the inner wall, he found a distinct communication between the portion of the lung which was attached to the ribs and the surface of the cavity, an aperture about the size of a goose quill. They might form a number of conjectures in this case, but, under all the circumstances, he was disposed to regard it as one of tubercular abscess, finding exit through the intercostal space, and so into the superficial structures. He remarked that the great elasticity of the walls of the cavity, and the existence of a second opening at its lower part might explain the absence of metallic phenomena by preventing the accumulation of liquid within it.—*January* 18, 1862.

*Syphilitic Laryngitis.*—Dr. E. HAMILTON said, that the specimen which he was about to bring under the notice of the Society was taken from the body of a female 60 years of age. She was admitted into Steevens' Hospital suffering from what she called sore throat; but an examination proved that the disease was not confined to the throat. The history she gave was, that the disease had been of four years' standing; that she had repeatedly applied for relief to different hospitals in the city; and had taken medicine on her own responsibility, but never got completely well. She also stated that she had reason to believe that her husband had been unfaithful to her and had given her syphilis. She, however, never had any symptoms, with the exception of sore throat.

Her throat showed evidence of extensive ulceration, the result of secondary syphilis. Her health was broken down. The ordinary means

having failed to arrest the ulceration, the treatment by mercurial fumigations was adopted; under this she improved considerably, but still the laryngeal distress was very great. She usually had paroxysms at night; and during his visit in the morning he saw her in one of these. He considered whether he would not be justified in performing the operation of tracheotomy, in order to relieve her. However, he did not do so then, feeling quite satisfied that Mr. Symes was quite competent to act in case of emergency. Things went on the same way for some time. On the evening of the 14th November, she had a violent attack of dyspnea, and Mr. Symes, finding that there was no time to be lost, immediately performed the operation, after which she experienced a quiet night. He saw her the morning after the operation, when she presented all the symptoms of extreme depression. She improved from day to day and passed a considerable time without any laryngeal distress. She was able to sit up and eat solid food. The disease seemed to have passed off. About three weeks afterwards she got up during a cold damp night to close the door; and the next morning he found her suffering from all the symptoms of intense bronchitis, which resisted all efforts of treatment, and she at last sunk under it. All the symptoms of disease had passed away; and, but for this woman's own indiscretion, she might have left the hospital well. He might allude to another case, almost precisely similar, which occurred some time ago, and was under the care of Mr. Wilmot. He was called on to operate, and the man shortly afterwards was able to leave the hospital. Subsequently, whilst working at the King's-Bridge, the tube, which he was in the habit of putting in himself, came out, he endeavoured to insert it as usual, but, becoming confused, and losing his presence of mind, it was necessary to bring him to hospital, as he was in a state of complete asphyxia. The object in performing the operation should be to prevent rather than to relieve asphyxia.—*January* 25, 1862.

*Disease of the Mitral and Semilunar Valves.*—Dr. MacSwiney said, the danger of engagement of the heart, and the irreparable injury which may be inflicted upon that organ during the progress of a case of acute fibrous rheumatism are, unfortunately, but too well known. In the series of cases of this disease reported by Bury *(British and Foreign Medical and Chirurgical Review)*, 476 in number, more than half, or exactly 253, were complicated with heart affection of some kind; and the specimen which I bring before the Society to-day affords, in its pathological condition, abundant illustration of the same fact.

This heart was removed from the body of a man, aged 27 years, who was admitted into Jervis-street Hospital under my care, in the beginning of December last, and died in about three weeks after he came under my observation. He was a tailor by trade, and had been of intemperate habits.

I received the following history :—About four years ago, after a good deal of exposure to cold and wet, he was attacked with an acute illness, accompanied with pain and fever, in fact, with what we call rheumatic fever. He was taken to the Hardwicke Hospital, and was placed under the care of Dr. Banks. He remained there for about six weeks, and then left quite well, at least, not conscious of anything being wrong with him. After that he was subject, from time to time, to rheumatic pains, and had, occasionally, epistaxis. A brother of his had died of consumption about a year ago; but no other member of the family had had rheumatism.

Upon admission he presented the following appearances :—His aspect was pallid and delicate; his respiration was quick and somewhat difficult; under his eyelids was puffy; his face, generally, had a swollen look, and there was a slight hectic blush upon each cheek. His legs and feet were œdematous, more particularly about the ankles; and he had some general anasarca. He had cough which was distressing, frequent, loud, and he brought up a quantity of mucous and watery expectoration, which was now and then tinged with blood. His voice was laryngeal, and at intervals he had almost complete aphonia. His pulse was quick, full, and hard, but quite regular. There was no visible pulsation in the vessels of the neck. He had attacks of orthopnea, but was usually able to lie down, and when he did, the decubitus was on his back. His tongue was partially covered with a yellowish white coating; the urinary secretion was scanty, high-coloured, and occasionally giving a reddish deposit. His sleep was bad; his appetite moderately good.

The chest sounded clear in front; the dulness upon percussion, in the cardiac region was heard over an abnormal extent. Posteriorly there was dulness upon percussion at the base of both lungs, but this dulness was not very great—was not absolute. Auscultation in this region revealed a crepitating *rale* with large bubbles, such as one might expect to hear in œdema in the lower lobes of the lungs.

A systolic bruit was heard at the base of the scapula near the posterior angle, *and in that situation alone.* I was never able to hear the bruit in front, although I frequently looked for it; the heart's action was loud, and sometimes tumultuous there; but I was able at all times to distinguish both sounds of the heart, sufficiently to enable me to say that there was no morbid murmur masking either.

At first, from the cough, the dyspnea, the quick pulse and crepitus, the pallid look, and more particularly, from the partial aphonia, the hectic appearance, and the family history, some suspicion of phthisis was excited in my mind; but I rejected the supposition, and wrote down the diagnosis—"heart disease; probably regurgitation through the mitral valves; œdema of both lungs, at base."

I pass over all details of treatment, which was merely confined to

the exhibition of such remedies as, from time to time, he seemed to require, to palliate urgent suffering.

He had been noticeably worse for some days, but died rather suddenly, nevertheless, on the 1st of January, 1862.

A *post mortem* inspection of the body was made 12 hours after death, and, I confine myself to reporting the state of the lungs and heart.

The lungs were healthy; that is to say, there was no tubercular deposit whatsoever in them; but they were, at their lower part, very much congested, and very red. Still, they crepitated, and portions of this engorged part floated, when put into water. There was no true pulmonary apoplexy.

A cluster of bronchial glands, very large, and very dark in colour, almost surrounded the lower part of the trachea, and may, by their pressure have induced the paroxysms of aphonia, and the stridulous breathing suffered from during life.

The heart was large, firm, and free from fatty degeneration. The right chambers were healthy; the right ventricle contained some fluid black blood. The walls of the left ventricle were thickened; its cavity contained a large fibrinous coagulum. The valvular apparatus at the left auriculo-ventricular orifice was disorganized. There was a permanent opening, or slit, of an oval form, through which the blood must have in part regurgitated during the ventricular contraction. The valves were hard, contracted, and thickened, and there were warty vegetations upon them in two or three situations.

It may be worthy of remark, in connexion with the sudden death, that one of the chordæ tendineæ attached to the valvular edge was ruptured from the wall of the ventricle; but whether this occurred *post* or *ante mortem*, I am unable to say.

At the aortic orifice we found two or three small granular vegetations or warty tumours deposited on the edge of the sigmoid valves, and producing, consequently, *insufficiency* in them. They were no longer able to fulfil their normal duty of closing the aorta against the recoil of the blood, as was proved by pouring water into the vessel, and noticing that it passed easily and speedily into the ventricle.—*January* 25, 1862.

*Contraction of the Left Auriculo-Ventricular Opening.*—Dr. BANNON presented a specimen of this disease, which occurred in a female under his care, who died on that day week in the Mountjoy Prison. She was 31 years of age, and had been for 16 months in prison, having led a very irregular life. She had been complaining for some time of dyspnea. She had watery expectorations, occasionally mixed with blood of a dark colour, and violent palpitations, with severe pain in the region of the heart, extending all over the chest. Her pulse was weak, unequal, rapid, and occasionally intermitting. When the expectoration ceased, the dyspnea became violent,

accompanied by orthopnea. On examination, by auscultation, he found considerable dulness over the region of the heart, and there was with this a peculiar soft bruit accompanying the second sound of the heart, which was audible a little above the apex of the heart. There was also a slight regurgitant murmur during the first sound, about which he could not thoroughly satisfy himself. He conceived that there was disease of the mitral valves, with contracted opening, and he did not think he ever saw a case in which the contraction of the opening was found so complete as in this. A mere semilunar slit constituted the auriculo-ventricular opening, and it was almost closed. The symptoms were very interesting. At one time, after a violent attack of palpitation, the pulse became exceedingly slow. She first fainted, after which the pulse came down to 34, and it was found, on applying the stethoscope, that the action of the heart was not so slow as the pulse. He was present on that occasion, and also at her death. For a considerable time before she died there was no pulsation in the arteries, but the heart beat on. The heart was hypertrophied to some extent, but there was no disease of the semilunar valves. The lungs were congested and œdematous, and universally adherent on both sides of the thorax. The principal point of interest in this case appeared to be how life could have been prolonged under a condition of such contraction of the auriculo-ventricular opening as was here present. The physical signs were valuable, as indicating the nature, although hardly the extent, of the disease present during life.—*February* 15, 1862.

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# PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.[a]

## TWENTY-FOURTH ANNUAL SESSION, 1861-62.

### SECOND MEETING, 21ST DECEMBER, 1861.

### DR. FITZPATRICK, in the Chair.

DR. MINCHIN exhibited to the society an infantile cranium of a remarkably distorted and unsymmetrical shape. Certain facts connected with the history of the case, during life, having tended to invest the specimen with some degree of obstetric interest, he would briefly detail all the circumstances which had come to his knowledge with respect to it. When he saw the infant first, it had just been admitted into hospital, aged five months, labouring under diffuse bronchitis. The child was of a delicate stamp; the body and limbs had all the appearance of defective nutrition; countenance congested and anxious; there was, however, no

[a] These reports are supplied by Dr. Geo. H. Kidd, Secretary to the Society.

symptoms whatever indicative of cerebral disturbance. The patient made a very fair recovery from the chest attack, but during its stay in hospital the singularity of its cranial contour having become the occasion of no small gossip among the women in the ward, the mother of the infant gave the following account of the matter, in reply to the inquiries which Dr. Minchin addressed to her on the subject, namely :—

That she had been delivered of this, her first child, about five months previously, in the Dublin Lying-in Hospital; that her labour was a very protracted and difficult one, and was completed with the aid of instruments of some kind, while she was under the influence of chloroform; that the "doctors" had a long account of the child written in a book, and that they employed a gentleman to make a picture of the child's head.

Having received this account, it was thought advisable to make inquiry at the Lying-in Hospital; and on searching the records for the case of M. C. it was found that no patient, of that name, had been delivered there, at the period indicated by this young woman; but that on the same day, and in the same ward, a patient, named H. R., aged 22 years, had been delivered of a male infant; that the forceps was employed, on account of delay in the second stage, (about 10 hours); and that the extraction of the head was *not attended with any difficulty whatever*. This appeared to be the only forceps case which occurred at the period named by the woman C., and it was reasonable to conclude that the cranial distortion, (if any existed), could not have been very great, else it would have elicited some remark in the clinical report, every peculiarity worthy of note, in such cases, being always carefully observed and recorded.

This infant was again admitted into hospital at the age of nearly eleven months. Its condition at that period was as follows : emaciation extreme; skin pale, flabby, and dry; diarrhœa very urgent; hard, dry, irritative cough; disinclination for food, (it had been weaned about a month previously); there was no unnatural heat of scalp; nor protuberance of the anterior fontanelle, which was very large; nor had convulsions ever occurred. The child lingered for about five weeks, and died at exactly twelve months of age.

The autopsy revealed abundance of crude tubercles in the lungs and the mesentery, with patches of ulceration in the small intestines. The membrane closing the fontanelle having been carefully removed, the lateral ventricles were tapped, but the quantity of serum obtained, from both sides, did not amount to six fluid drachms. On examining the cranial sutures, the lambdoidal was observed to have a singularly unsymmetrical outline, the occipital bone having developed much in excess towards the left side; and this fact was strongly opposed to the notion entertained by the infant's mother, namely, that instrumental compression had given origin to the obliquity which this part of the head was found to possess ; for, no degree of compression exercised by the forceps, however severe or

long continued, could have any action on the cranial bones, save that of altering their relative position one to another, (putting fracture and contusion out of the question); it could not possibly cause the natural *outline* of any one bone to pursue a new and unusual course. The clinical history of the labour, moreover, as obtained at the Lying-in Hospital, is quite conclusive upon this point. It would appear, therefore, that the abnormity of shape, exhibited in this cranium, was merely an exaggerated degree of
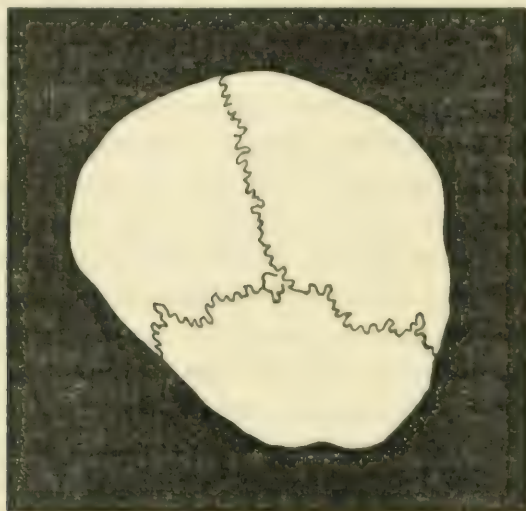


that want of symmetry so commonly observed in infantile heads, and was connected, in some way, with a delicacy of original constitution, which gradually developed itself in the form of a general tuberculosis. It was to be remarked, in this case, that not only was the anterior fontanelle much more open than it is usually found in children of one year old, but none of the teeth had made their appearance.

Mr. TUFNELL read the following case of *Extra Uterine Fetation—Twin Conception from the same Ovary—Normal descent of one fetus into the Womb; arrest of the other in the fallopian tube; escape from thence, by ulceration, into the cavity of the abdomen, followed by hemorrhage, and death in* 24 *hours.*

M. K., a young woman, twice married, and who, seven years before, had given birth to a healthy living child, was again, on the 6th of July, 1860, between three and four months pregnant. Upon the evening of this day she was in the act of getting into bed, when she was seized with a sudden and severe pain in the lower part of the abdomen. She had walked, during the day, upwards of four miles, and was somewhat fatigued. She was seen about an hour and a half after the first onset of pain, and had then a weak fluttering pulse, with a countenance pale, anxious, and pinched. Great pain was complained of over the whole abdomen, more particularly in the umbilical and right iliac regions. Upon examination per vaginam, the os uteri was found advanced and

slightly retroverted, its orifice contracted. An anodyne of a *full* dose of opium was prescribed, and wine ordered to be given; whilst hot jars were applied to the feet.

Five hours afterwards she was in the same state, and no stimulants, ammonia, brandy, or wine, appeared at all to rouse her.

At nine P.M. she expired; having been ill, from the commencement to the close, only twenty-four hours.

The *post mortem* examination was made fifteen hours after death. The abdomen was bulged out and protruded to a degree considerably beyond what it would be at this period of pregnancy. Upon opening the walls upwards of three quarts of fluid and clotted blood escaped, amongst which was found floating a diminutive fetus. Upon making further investigation a rent was discovered in the right fallopian tube, out of a cyst in which, this fetus had escaped. The contents of the cyst seemed to consist of coagula and shreds of lymph.

The fallopian tube and right ovary were agglutinated together by shreds of recent lymph.

Upon making a more careful inspection of the fetus, the uterus, and its appendages, the following was found to be the actual condition of each. The fetus itself was barely an inch in length, and only a few grains in weight. It appeared to be a male, from the development of penis, but this growth might possibly be clitoridal. The head and eye, the arms and hands, and the ribs, were very clearly perceptible, and the spine, with a cleft at its inferior half. The lower extremities were less fully developed.

The uterus was enlarged to about the size of the third or fourth month of pregnancy, and contained a healthy male fetus, proportionate to the date of conception, connected by the umbilical cord to the placenta, which was still attached to the fundus uteri.

The fallopian tube on the right side was largely dilated; the dilatation, which had been ruptured by the escape of the fetus being one and a half inches long; commencing about three quarters of an inch from the uterus, it contained, at its upper or distal extremity, a solid organized mass, resembling a miniature placenta. Immediately above this dilatation, viz., on its outer border, the fallopian tube was of its natural size, and the fembriated extremity perfectly natural.

The ovary on the right side was nearly twice the natural size, and appeared to be divided into two equal portions by a kind of hour-glass contraction. Upon dividing the ovary through this double enlargement, by a longitudinal incision, a distinct corpus luteum was seen in each division, one occupying either of the portions into which the ovary was divided.

Upon the left side the ovary and the fallopian tube were in their normal condition; so that both ova had, in this instance, escaped from the right

ovary.   The os uteri was tightly closed, and the cervix pointed, and if facts to the contrary had not been known, it might have been considered a primiparous conception.

This woman, then, it is clearly evident, died of internal hemorrhage, in consequence of the rupture of the cyst in the fallopian tube, and the escape of the extra uterine fetus into the cavity of the belly.

For the opportunity of detailing this case, and securing the preparation, I am indebted to my friend Dr. Lockwood, surgeon of the Royal Scots Greys.   The preparation is in the museum of the Royal College of Surgeons in Ireland.

Dr. KIDD exhibited a dissected preparation of a large congenital tumour of the head, along with a highly finished coloured drawing, by Mr. Connolly.

The woman, whose child was born with this tumour, was an extern patient of the Coombe Hospital; her labour was not attended with any difficulty.   This was her third child, her previous ones being quite healthy; it was brought to the Coombe Hospital the day after its birth, with the hope, that the tumour might be removed by surgical operation, and was admitted with the mother, that it might be kept under observation.

The tumour sprang from the region of the posterior fontanelle, it was connected to the head by a short pedicle, measuring 4 inches and $\frac{3}{4}$ in circumference, and 1 inch in length.   From this the tumour



swelled out into a globular form, and measured 25 inches in circumference.   It was covered, for the most part, with normal integument, and for some distance from the head, had hair growing upon it.   In some places, remote from the head, the covering was thin, transparent, and

dark coloured, allowing the parts underneath to be seen through it. The tumour evidently contained much bloody fluid, and a large quantity of solid matter, this latter being most abundant near the head. The child was well developed, in every respect, except the head, which was small, the frontal region being much flatter than natural. It took the breast well, and seemed to be a healthy well-thriven infant. It bore pressure on the tumour, or on the pedicle, without apparent inconvenience, it seemed to feel the pressure, but suffered neither from coma nor convulsions. After some days, ulceration at the thinnest parts occurred, and large quantities of serum escaped, reducing the size of the tumour considerably. The child now ceased to take the breast ; and died on the twelfth day, apparently, from the irritative fever of the ulceration.

Twenty-four hours after death, the roof of the skull, with the tumour attached to it on one side, and the brain and dura mater on the other, was removed. On reflecting the integument covering the pedicle, a strong fibrous sheath was found, attached at one side to the edge of the fontanelle, and continuous there with the peri-cranium and dura mater, and expanded over the tumour at the other, in the walls of which it was gradually lost. A section, extending right through the tumour, was now made. It was found to be composed, for the most part, of red, semi-solid substance, presenting not much trace of organisation. Furthest from the head the walls were thin, and here there were large loculi, containing bloody fluid, next the head it was almost solid, but had a small cavity in the centre, which communicated with the cavity of the dura mater, and in it a small nodule of cerebral substance was found, not larger than a small unshelled almond, and which was continuous with the hemispheres of the cerebrum. The brain, as contained in the cavity of the skull, was found to be perfect in all its parts, though small. The brain-like substance in the tumour seemed rather to be an out-growth from the brain, than a part of the brain itself.

As to the nature of this tumour, Dr. Kidd remarked, that two opinions might be held—1st, that it was a hernia cerebri, and analagous to the tumour seen in cases of spina bifida. Against this view the following arguments, he said, might be adduced : *a*—the completeness of the brain itself, as contained in the skull, for, though small, from being deprived of a portion of the blood intended for its growth, it was perfect in its parts. *b*—The perfect development of the child. *c*—The non-production of convulsions, or coma, on pressing the tumour. *d*—The shape of the tumour ; the small pedicle and largely expanded mass. *e*—Its structure ; the large quantity of red tissue ; *formative tissue*, or blastema ; and the small size, compared to the general mass, of the cerebral substance. 2nd—It might be regarded, he said, as an attempt at the formation of a double monster ; as, in fact, the first stage towards the formation of a double child, such as the Russian child, whose photograph has been deposited, by Mr. J. S. Hughes, in the museum of the College of Surgeons, and which consists

of two perfect children, adherent to one another by the crowns of their heads.

It is now well established, Dr. Kidd said, that double monsters are formed, not by accidental adhesion of twin germs, as taught by St. Hilaire, but by the excess of development of a single germ—that they are examples, as Vrolik expresses it, " rather of singleness tending to duplicity, than of duplicity tending to singleness." The researches of Allen Thompson seem to place this beyond question, he having actually observed the single germ in a goose egg taking on the process of duplication. Nor is it difficult to conceive that it should be so, when we reflect on the process of development. The single " germ cell " dividing and subdividing till it forms a mass of cells, the " germ mass," in the centre and at the expense of which a new cell is formed, and from this, by a similar process of cell subdivision and growth, the blastema is prepared, out of which the new being is formed. This blastema is modelled into the several organs of the new being, under the influence of germs distributed through it.

These germs may be deficient in formative power, when the new being will be defective in one or more of its parts, as in cases of acephalous infants, &c. Or they may be possessed of excessive powers, and give rise to various forms of duplicity—partial, as where the fingers or toes are in excess, a peculiarity that may run through several generations in succession—or complete, as in double monsters.

Dr. Kidd referred to a paper he had published in the *Dublin Hospital Gazette*, in 1856, (vol. iii., p. 82), in which he had attempted to formularise the facts ascertained as to the errors of development, as follows :—

" The formative germ is likely to suffer from errors of quantity ; of quality ; and of distribution.

" The quantity of formative power and material may be deficient, giving rise to some of the deformities attributed to arrest of development.

" The quality may be bad, giving rise to some of the forms of mole.

" The quantity may be in excess, and the quality deficient, giving rise to such cases as the present ; or

" The quantity may be in excess, and the quality good, giving rise to a double monster, more or less perfect, according to the amount of excess ; varying from the supernumerary fingers, to the parasite, and the perfect double monster.

" Finally, the balance of distribution may be wrong, as in some cases where part of the body is deficient, and other parts are in excess."

The tumour that formed the subject of the paper referred to, grew from the hard palate of a well developed child, protruded from the mouth, and was nearly as large as that growing from the head in the present case. In it there were germs, distributed throughout the mass, possessed of very considerable developmental powers ; which produced in one place a finger, in another a portion of very perfect intestine, and in others

various portions of bone, &c. The great mass of the tumour consisted of tissue analagous to that forming the mass of the tumour in the present instance. The intestine, in that case, presented this remarkable feature, that it was double; in fact, the germ by which it was formed, had such an excess of power as to double itself, so that if all the germs had posessed similar powers a triple monster would have been produced, instead of a merely double one.

In the case now laid before the society, it would appear that an excessive quantity of material was produced, but of such a quality, or, rather, so deficient of developmental power, that no organisation took place, except at the point where the process began, viz. : at the brain, and even there to a very limited extent.

The tumour springing from the sacrum, laid before the society by Dr. M'Clintock some years ago, was probably of the same character, viz: an excessive formation of material without powers of organisation. The tumour referred to, as growing from the palate, presented the same excess of material, but with higher power of organisation.

The well-known case recorded by Sir E. Home, where a perfect child had a head, with a complete brain and well marked features, but no body, growing from the back of its own head (from the same region as in the case under consideration), exhibits a further advance in the process ; the power of organisation being of a very high order ; and the Russian child, already referred to, exhibits the same process, in its highest degree, both the quantity of material and the powers of organisation being sufficient for the development of a perfect double child.

Dr. HALAHAN read the following paper *on the Mechanism of Labour :—*

The position in which the head of the fetus enters and passes through the pelvic cavity during labour, has long occupied the attention of many midwifery practitioners, and given rise to a great deal of discussion. But I am convinced every practical man must allow that the description given by Naegelè, is the accurate, and also the only correct one; and that the practitioner cannot, with any degree of truth, contradict the statement that the head, at the full term of gestation, enters the pelvis in the four positions described by him. I shall here briefly enumerate them, the first has the anterior fontanelle directed to the right sacro-iliac synchondrosis, and the posterior one towards the left foramen ovale ; the second, is where the anterior fontanelle is, to the left sacro-iliac synchondrosis, the posterior one to the right acetabulum ; the third is the reverse of the first, and the fourth of the second.

I am equally certain that those who pursue the study further, will agree with me in saying, that although the head enters the brim in the before-named four positions, yet, at the commencement of labour, when the os uteri is barely beginning its dilatation, the anterior fontanelle is

always directed towards either acetabulum or presenting in the third or fourth positions of Naegelè. That the fourth changes, at the beginning of labour, into the first; and the third does not change into the second until the head is distending the perineum; that this is the general course, any other being an exception.

That to diagnose the position in the first stage of labour, is one of the difficulties that the accoucheur has to overcome, I am fully aware of. Nothing but constant attention, very extensive practice, together with a delicate touch, will, with any degree of certainty, conquer the obstacles, and make him master of this part of his profession; for, although in theory it seems very easy indeed to be able to diagnose positions, or to say which fontanelle presents at either acetabulum, we find, in practice, it is one of the most difficult points to be perfectly satisfied about, particularly when the head is high up, the membranes entire, and the os uteri not more dilated than to the circumference of a shilling.

If, then, it is a fact that at the commencement of labour the face is always directed towards the pubes, (and I have taken the greatest care and trouble to be perfectly certain, and have fully satisfied myself that it is so, not by the mere examination of a few ordinary cases, but by the most careful and constant investigation of some thousands of patients which I had the opportunity of watching from the commencement of labour until the completion of the second stage), there arises the question, how is it we so seldom find the head in the fourth position when entering the brim, or even in that position when the os uteri is half dilated, but on the contrary, generally discover it in the first? Whereas, in the third, it is the exception for the change to the second to take place until at the termination of the second stage. The simple answer is, that when the posterior fontanelle is on a lower level than the anterior, the change takes place immediately after the accession of labour, or, in other words, when the chin becomes depressed on the chest, or flexion of the head occurs early, which is the case in the presentation of the head in the fourth position. But in the third, we generally find the anterior one a little lower, or on a level with the posterior, the head being neither flexed nor extended, which prevents the change taking place until the posterior one becomes the lower. This seemingly slight difference in the two makes a very great one in the effect of the uterine action in its efforts to expel the head, and make the change which I shall now try briefly to explain.

I presume all will allow that the pain or force of the uterus takes its course in the axis of the pelvis, and that the entire power may be directed effectually, and with as little loss as possible, it is necessary that the occiput should move in the same axis. This is the case in the first and second positions of Naegelè; consequently, if the head enters the brim in either of these positions, we should expect that labour will

proceed favourably. If we examine a patient at the commencement of labour and find the head presenting in the fourth position, the posterior fontanelle will generally be the lower or most easily reached by the finger, the anterior one being very high up, and felt with difficulty. This admits of the uterine force having full power on the head, and the change taking place at once. But when the anterior fontanelle is on a level with, or a little lower than the posterior one, the greater part of the uterine force is lost, being divided between the occiput and sinciput. This can only be understood by remembering the direction the uterine force takes, as well as the part of the head it has most power on, as we will there see that when the forehead is the lower part, the pain has not its full effect on the head, but that there is a loss of power. This is the case in the third position, which I think clearly shows the reason that the head enters the pelvis in the second position so rarely. Again, if we find the anterior fontanelle presenting, in fact, mid way between the sacrum and pubes, in the third or fourth position, we may naturally expect that the labour will be rather protracted, and the second stage very much prolonged, for the head will, with very few exceptions, be expelled, face to pubes.

It may very reasonably be asked, is there any practical use in being able to diagnose in what position the child's head is presenting? Certainly there is, the greatest. I shall merely mention two instances. In applying the forceps, we always intend and wish to place the pubic blade over the ear, which will be felt a little to the right or left of the pubes. Supposing, then, you have the instrument correctly placed, is it not of very great importance to know which ear is towards the pubes, as in the first and third positions, we have the ear in the right half of the pelvis; but if, not knowing the head is in the third, we try to rotate as if it were in the first, we bring it out, face to pubes, which is not so favourable as if we had changed it into the second position, the occiput not adapting itself to the hollow of the sacrum in the same manner in which the face does? Again, if version is to be performed in a head presentation, is it not of the utmost importance to ascertain whether the feet are lying towards the abdomen or back of the mother, whereby we may know which hand to use in performing the operation, and this fact can only be ascertained by an accurate knowledge of the position?

I have put in a tabular form five hundred cases, in which the head has entered the pelvis, showing the relative frequency of the four positions of Naegelè, taken indiscriminately from the beginning of this year. It will be seen that the first position is the most frequent of all, being 61 per cent.; the third next, being 31·60 per cent.; the fourth next, being 6·40 per cent., and the second least of all, being 1 per cent. That the third changed to the second in every four cases out of five, or nearly so, the proportion being 79·75 that changed, and 20·25 expelled

face to pubes. The fourth changed into the first in 84·37 per cent., and continued as it entered the pelvis in 15·62 per cent.

THE ASCERTAINED POSITIONS IN 500 CASES, 1861.

| POSITIONS OF NAEGELE. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | Primary 3rd changed to 2nd | Total, 3rd Position | 4th | Primary 4th changed to 1st | Total, 4th Position |
| Total in 500 cases, | 305 | 5 | 32 | 126 | 158 | 5 | 27 | 32 |
| Per centage, . . | 61 | 1 | 6·40 | 25·20 | 31·60 | 1 | 5·40 | 6·40 |

Of the 158 cases in the 3rd position at the commencement of labour, 126, or 79·75 per cent. changed to the second; and of the 32 cases in the fourth, 27, or 84·37 per cent. changed to the first in the progress of the labour.

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# TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY.[a]

*( Continued from* vol. xxxiii., No. 65, p. 240.*)*

### SESSION 1861-1862.

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#### OCTOBER, 23rd, 1861.

#### DOCTOR POPHAM, President, in the Chair.

*Rigidity of the Left Lower Extremity from Anchylosis ; Caries of the bones of the Ankle Joint.*—Dr. POPHAM exhibited the foot and a portion of the leg of a woman, the foot being extended to such a degree that the toes were drawn backwards towards the sole, and the nails buried in the flesh, producing a most distorted appearance. In connexion with this condition there was a rigid and attenuated state of the whole limb. The history of the case was as follows :—

Bridget Curran, a shirt maker, about 35 years of age, unmarried, was admitted into the Cork Union Hospital, under his care, in May, 1858, suffering from what is popularly termed "a stone bruise." She had several uncured abscesses of the absorbent glands of the neck, and had

[a] These Reports are supplied by Dr. W. P. Bernard, Secretary to the Society.

besides, complete aphonia. The heel had become the seat of a small abscess which healed thoroughly to all appearance, but tenderness continued to be felt in the part and spread over the dorsum of the foot. Dr. Popham examined the parts carefully and repeatedly, but was unable to find any obvious cause for the severity of the pain, which was more superficial than deep-seated. After a patient trial of various remedial agents, he found that nothing produced any alleviation of the case, and that the foot was gradually becoming forcibly and painfully extended, any attempt to bend it upon the leg giving rise to violent pain, and even the touch of a sponge could scarcely be borne. Startings of the limb occurred constantly, and the patient found most relief by sitting up in bed with the legs hanging down. Without presenting any visible marks of inflammation, the foot continued to be drawn backwards until it seemed almost in a right line with the leg, assuming somewhat the position which a ballet-dancer tries, by great muscular exertion and long practice, to maintain, when balancing herself upon the toes. At this period of the case amputation was proposed, but after a careful examination of the lungs, the existence of tubercle was clearly ascertained, which necessarily precluded its employment. The limb then began to waste away, and the knee joint to exhibit similar suffering, terminating in similar rigidity. The ailment continued slowly to travel upwards towards the hip, so that eventually the whole extremity became rigid. There was no sign of abscess or fistulous opening anywhere, but nothing could equal the attenuation of the limb, it looked dry and shrunken, like bone covered merely with skin, the other leg which retained, till towards the close, its natural size, appearing, by contrast, large out of proportion. She continued in this state nearly three years, the hectic fever and pain being kept in check by the careful use of opium, but she finally sunk from the tubercular disease of the lungs, her mind being clear to the last.

The *post-mortem* examination of the parts showed the existence of true anchylosis in the knee and ankle joints, but the hip joint still admitted some motion. In the ankle joint, the cavity was nearly obliterated, and the articular extremities were held firmly connected by a tough fibroid tissue, so that the power of flexing the foot was lost. The foot was greatly distorted, the concavity of its arch being increased so much, that when it rested on the great toe and heel, a perpendicular from the middle point of the chord of the arch upon the foot, measured two inches. The great toe was twisted downwards and outwards, considerably beyond the line of the other toes, which successively became less and less curved backwards, the little toe being least so; the nails were deeply imbedded in the flesh. On examining the adductor and flexor muscles of the great toe, they appeared in a thickened and tetanic state, curving it downwards, and increasing the arched form of the foot. Most

of the other muscles appeared degraded into mere cellular tissue of an orange colour; the tendo Achillis showed but little alteration.

On examining the internal state of the bones, the lower portion of the tibia was found enlarged, and on breaking it across, it exhibited the dendritic appearance of a carious bone. Its colour was pinkish, the cancelli were wide and full of a colourless fatty fluid, turning the knife black: the cartilaginous margin was easily separable. The astragalus was so soft as to be cut through by the knife; its cells were also expanded and full of the same fluid. The large toe, which was supposed unsound, was found unaffected. The most careful examination failed to detect any sinus in the parts. The lungs and liver were extensively diseased.

Dr. Popham remarked, that in the preceding case, one of the chief features was its slow progress, when compared with the intensity of the pain and hectic fever, and which he considered partly due to the judicious use of opium. For some time the affection of the joints seemed, instead of accelerating, to check the pulmonary mischief. Another circumstance which protracted the case, was, no doubt, the total absence of external abscess or sinuses. The patient was of a habit of body intensely scrofulous; for a time, cod liver oil and the preparations of iron seemed to afford her some benefit, and a favourable change in the pulmonary textures was anxiously looked for, such as would render amputation justifiable, but unfortunately the hope proved delusive.

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### November 13th, 1861.

### Dr. Popham, President, in the Chair.

*Cirrhosis of the Liver.*   Dr. Willett, exhibited the liver and spleen of a patient who had died from Cirrhosis of the Liver, and related the following particulars of the case.

The present case which Dr. Townsend has kindly allowed me to bring before the Society, has not the fullest details that I could wish, in consequence of the deceased being a foreigner, and incapable of speaking our language. The same cause prevented me from ascertaining the antecedent circumstances, and his illness before he came under our notice.

William M'Carthy, aged 40, was admitted into the Workhouse Hospital, on October 23rd, under the care of Dr. Townsend. On admission, the skin, generally, presented a brownish yellow colour, like the appearance of past jaundice. The lungs, on auscultation, seemed normal, as also the heart sounds, but with respiration there was more or less slight crepitus, which seemed due to accumulation of water in the air cells, as the crepitus seemed very fluid, the abdomen was very tumid, from the presence of fluid, and Dr. Townsend and myself, on palpation, found the spleen much

enlarged, extending from the left hypogastric region into the epigastric. The liver was not so easily made out, in consequence of the great distension of the abdomen with fluid, and the tightness of the recti and the other abdominal muscles, which some authors have given, I believe, as one of the symptons of disease of the liver.

After admission, the urine was suppressed, and diarrhœa set in, which, on being stopped, again the kidneys resumed their function, and then for some little time, these secretions became vicarious, one stopping whilst the other continued. The treatment was directed to support the patient, who was extremely weak, and also to get rid of the fluid by the secretions; but he gradually sank under its accumulation, and general prostration. The veins on the outside of the abdominal walls were much enlarged, and kept up a communication with the lower extremities, by means of the epigastric veins, thus indicating some internal obstruction to the circulation.

*Post-mortem.*—The lungs nearly normal, excepting some few old pleuritic adhesions; the abdominal cavity very full of fluid; the peritoneum looking flabby and soft, from its being soaked in the liquid contained in it; the kidneys large and congested with blood; the spleen very turgid and increased in vascularity; and the liver much contracted, and having adhesions on all sides so as to render it difficult of removal; the peritoneal coat much thickened, showing that inflammation had thus increased it; the gall bladder hanging very loosely from the lower part of the liver, and the bile all absorbed; the lower surface of the liver full of small indurated masses attached by narrow peduncles, and showing here, as well as over its entire surface, the effects of inflammation, (I may be allowed to surmise that it is greater at the lower part, in consequence of the products of inflammation gravitating to the most dependent points); the omentum nearly gone, and of a blackish colour, either absorbed from the pressure of the fluid to which it was subjected, or taken up for nourishment as fat into the system.

The spleen was very much increased in size, which, I think, was due to the portal system being obstructed, and serving merely as a safety valve to the impeded circulation through the liver, until it should find its way through collateral circulation, therefore not a disease of itself, but only one of the sequences of the diseased liver.

I find that inflammation of the liver is divided into that affecting the substance of the organ, and that of the capsule. The former affection is a rare one in temperate climates; that of the capsule extremely common. Drs. Bright and Budd, prove that in the early stage of cirrhosis, the liver is enlarged, and this depends on the effusion of serum, and lymph, into its textures, as the result of inflammation, the cirrhotic state arising from a subacute inflammation being set up in the Glissonian sheaths. The remote cause of cirrhosis, Dr. Budd says, is certainly, in many cases, the

habit of spirit drinking. The alcohol absorbed into the portal blood, first passes through the liver, and very probably excites some action on its tissues, the spirit acting perhaps as a local irritant having greater affinity for the liver than for other organs, as shown by the fact, that in animals poisoned by it, at death, nearly all can be distilled from this organ. But another cause is given, viz., that the blood is changed into what Rokitansky calls the fibrinous crasis. Obstructive cordiae disease also, is given as a cause, but as only a predisposing one. Congestion favours the occurence of both inflammation and degeneration, so that both the heart disease—that is, constriction of the mitral orifice, and cirrhotic change in the liver, are often, I think, common results of the same condition of blood to which I have alluded. Many other causes are given besides alcohol, viz., such as increase the quantity and alter the quality of the fibrin of the blood.

Several useful questions suggest themselves in this case, viz.: can we detect the first stage of cirrhosis, that is, when the products of inflammation are thrown out? Whether we shall consider it as hepatitis, acute, or chronic, considering that Glisson's capsule enters into one-third of part of the organ, (the bile cells only excluded) or, an inflammation special to the Glisson's capsule. The signs and treatment of such inflammation; and lastly, if we can remove the products of this inflammation by absorbents, iodide of potassium, mercury, &c.; or whether, as in inflammation of the pleura and peritoneum, they become, in time, as parts of the body, receiving vessels from the same source, and therefore soon incapable of such absorption, and only shrinking by age, but never entirely dispersed, if not removed during the inflammatory stage.

*On the Treatment of Psora in Military Hospitals.* By T. W. BELCHER, M.A. and M.B., *Oxon. and Dublin* ; L.K. and Q.C.P., Ireland ; Physician Extraordinary to Cork Fever Hospital, &c.

There are few diseases which the physician is called on to cure, so disagreeable as psora ; not indeed in its consequences, but in several of its accidents.

Whilst sulphur ointment reigned supreme, the soldier who had the misfortune to contract it, more nearly resembled the outcast leper of sacred history, than any other diseased mortal in these countries.

If *he* was not compelled to cry "unclean, unclean," to all his neighbours, it was unmistakably done for him ; and plastered all over with greasy sulphur, his confinement "sine *cloake*, sine *shirt*, sine *britches*," (like that of the dead Lord Mayor of London[a]) was only relieved by copious libations of haustus sennæ, ever and anon recurring with the regularity of drums and fifes at roll call and reveillé.

[a] Pettigrew's Chronicles of the Tombs, p. 474.

But at length an ingenious writer in *Braithwaite's Retrospect of Medicine and Surgery*, (vol. 34, p. 266) propounded the new theory, that psora could be cured in half an hour, without either sulphur ointment or black draught.

It was tried at Chatham, Aldershot, and Woolwich, in each place with perfect success; thereupon it was recommended for general adoption and we can only say, that if each case falling into the medical man's hands, could be so easily cured as those to which we refer, the profession —even in this intensely practical age—would speedily regain its ancient magical renown.

*Braithwaite's Retrospect* says, "the remedy is prepared by boiling one part of quick lime with two parts of sublimed sulphur, in ten parts of water, until the two former are perfectly united. During the boiling, it must be constantly stirred with a piece of wood, and when the sulphur and lime have combined, the fluid is to be decanted and kept in a well stopped bottle. A pint of the liquid is sufficient for the cure of several cases."

During the training of the militia of this city (of which I have the honour to be the medical officer,) in the past summer, three men, John Farrell, Thomas Murphy, and Murtagh M'Carthy, on coming up for drill were found to be infected with this disease, and were subjected to the following process, viz. :—

First, a hot bath, then the fluid preparation above described was diligently rubbed into the skin for more than half an hour. As the fluid evaporated, a layer of sulphur was laid on the skin, and this was removed by a second bath, leaving the subjects—for they could hardly be termed *patients*—completely cured. During the rubbing of the preparation, the acarus was killed, and although all traces of the scabs were not immediately removed, yet the scabs themselves were.

In Belgium, the treatment is anticipated by rubbing the body for half an hour with black soap, but the writer in the *Retrospect* says this is not necessary, the careful application of the fluid sulphur being the only essential act.

The compound formed in the preparation referred to, is a penta-sulphide of calcium and a hypo-sulphite of lime.

Dr. Frazer of Dublin gives the combination and result in the following formula :—

$$3CaO + 12S = 2CaS_5 + CaOS_2O_2$$
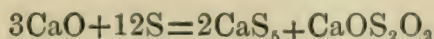
Medical officers of dispensaries have frequent reasons to complain of the inveteracy of this disease, when treated by all ordinary remedies, but (provided a change of clothing could be ensured to the patients) by the plan here noticed, an immediate cure can be effected.

Albeit, psora is unmentionable, in plain English, to ears polite, yet physicians have often met with it and found difficulty in treating it

amongst what we call "the better classes,"—here is an easy plan for subject and physician.

In the case of militia men called out for training only during a few weeks in the year, it is plain they, by this plan, give some value for their pay, instead of spending all their time in the leper house of the regimental hospital.

*A Case of Difficult Labour, from Malformation of the Pelvis, complicated with a Uterine Polypus.*  By WILLIAM S. GARDINER, M.D.

Ellen Furlong, 30 years of age, the wife of a soldier, was admitted into the lying-in ward of the Cork Workhouse Hospital on Thursday, 26th of September, 1861, at seven o'clock, P.M., in labour with her first child. It commenced with a dribbling of the liquor amnii, the dilating pains recurring about every 20 minutes.  She continued in this state until Saturday morning, the 28th, when the os uteri became fully dilated, the head presenting.  At 10 o'clock of the evening of the same day I was called on by the midwife to attend, and as the patient had not emptied her bladder for some hours previously, I used the catheter, and took away about a pint of water; after which, finding, on examination of the parts, the head so firmly wedged in the pelvis that she could not possibly be delivered without the use of instruments, I tried to apply the forceps, both long and short, with all the adroitness I could, but did not succeed; so I forthwith wrote a note to Dr. Popham, informing him of the case—that I tried, but could not apply the forceps, intimating to him my apprehensions, that the patient could not be otherwise delivered than by using the perforator, and wishing his assistance, which he most kindly and promptly afforded me.

On his arrival he, with great patience and perseverance, for an hour, at least, tried to apply both the long and short forceps, but could not succeed in bringing them to lock, the blade passing on the right side with ease, but an insuperable impediment existed on the left to its introduction.  As the soft parts were enormously swollen and painful, and the woman's strength was fast giving way, we were reluctantly compelled, in order to save the mother's life, to desist from all further efforts to deliver the child by the forceps; the possibility of its being yet alive, from the circumstances of the case, seeming very unlikely, we resolved to reduce the size of the cranium by emptying it of its contents.  Doctor Popham perforated the head without any difficulty; but we both experienced great resistance in drawing it forward, owing to its ossified state, which made it quite unyielding.  There existed besides a great distortion of the pelvis, arising from a very contracted state of the pubic arch, and a close approximation of the tubera ischii; there was also a uterine polypus, about the size of a large pear, rather flattened, which had been

forced down into the vagina, and which I afterwards detected on intro-
ducing my hand to remove the placenta. After long perseverance,
through fear of using any undue violence, lest the soft parts might be
injured, we succeeded in drawing down the cranium. I am almost
inclined to think that we should have failed in accomplishing this by the
ordinary means, were it not for our having recourse to the duck-bill
craniotomy forceps of Dr. Davis, which, most fortunately for us, Dr.
Popham brought along with other midwifery instruments. After freeing
the cranium, the question then arose, how we were to liberate the
shoulders, which seemed to us equally difficult from the exceedingly con-
tracted state of the pelvic bones; but we ultimately succeeded in doing
so by great ingenuity in the use of the blunt hook, and thereby most
cautiously drawing them out; the remainder of the body was brought
out after some little delay, but not without trouble. The placenta was
attached to the fundus uteri, and had to be removed by introducing the
hand, and was further impeded by a strong hour-glass contraction, which
offered considerable resistance.

As much diarrhœa followed the delivery, and her condition was most
precarious, we were obliged to give her a large quantity of wine. When
she rallied somewhat, we administered 50 minims of tincture of opium
in a camphor draught.

Sept. 29th.—The nurse stated that she had some sleep, interrupted by
starts of pain. A smart hemorrhage occurred in the morning, which was
checked by the usual remedies. At present her face seems perfectly
blanched; the pulse very rapid and fluttering; some tenderness is felt
on pressing the abdomen; tongue dry and brown; the vaginal surface
was swollen and livid. She was ordered wine freely, and pills every
fourth hour, consisting of a grain and a-half each of calomel and cam-
phor, and one grain of powdered opium in each pill. The vagina to be
syringed with warm water and camphorated spirit in the proportion of
half an ounce to about a pint of water. A turpentine epithem was
ordered for the abdomen.

Sept. 30th.—Since last report she took six pills, containing six grains
of opium, with much relief; tongue dry; pulse 120, feeble; abdominal
tenderness relieved. She was unable to pass water, and the catheter had
to be introduced. Tendency of the soft parts to assume a sloughing
appearance. Gums feeling a little tender. To take the pills every sixth hour.

Oct. 1st.—The soft parts beginning to slough; she complains of much
pain within the vagina; and there was a copious foul discharge. Pros-
tration very great; retention of urine continues; the mouth is becoming
sore. Omit the calomel. She was ordered to take a pill of two grains
of camphor and one of opium, made up with aromatic confection, every
sixth hour; to continue her wine, and to get strong beef tea through the
day. A yeast poultice was ordered for the soft parts.

Oct. 2nd.—Some improvement in the state of the soft parts. Ordered to continue everything.

Oct. 4th.—Same treatment continued. Retention of urine persists. The nurse reported that portions of a fleshy substance had come away. The soft parts show a healthy surface. It is unnecessary to detail the daily state of the case, the improvement being gradual, though she suffered greatly from exhaustion. The soft parts assumed a clean, healthy appearance; the retention gave way with a *sudden* gush of water; and on examining for the polypus with the finger, we found that it had sloughed off. On the 10th she was ordered meat, and on the 16th the wine was changed to porter, and she was directed to take a tonic bitter of infusion of colomba, with compound spirit of ammonia, and tincture of cardamoms. As there was a thin purulent discharge of an irritating nature, a vaginal injection of oak bark decoction was used.

Nov. 5th.—The patient has been up and about for some time; and as she expressed a wish to go home to-day, we made a close examination of the vagina with the speculum, as we dreaded at an early period of the case, from the pressure on the bladder and the inflammation of the soft parts, that a urinary fistula might occur. We found, with much satisfaction, that the entire vagina was quite healthy, except a very slight ulceration, not yet quite healed, near the external labia. The os uteri was a little patulous, but no trace of the polypus existed. We had thus the satisfaction of sending this poor woman home without having sustained any injury whatever from her severe sufferings, and, except a remarkable degree of paleness, showing all the appearance of returning health and strength.

I would draw attention particularly to the free use of opium in this case; it appeared both to allay pain and keep down inflammation. Though taking, at one period, six grains of opium a-day, she showed none of the untoward effects of the medicine. It was evident that the retention of urine must have been caused by the pressure of the polypus upon the urinary organs, as, upon the sloughing away of that body, a gush of urine took place, and the retention totally disappeared.

Dr. Willett exhibited a pathological specimen, and related the following particulars of the case.

Michael Mehegan has been 13 years in the workhouse and hospital; having generally suffered from bad health, which seemed due to his possessing the scrofulous diathesis. Four years since he was attacked with paralysis in the right leg, which prevented his moving about in the usual way, and thus necessitated his lying more or less in bed. Still later, two years since, he had an attack of hematuria, which lasted for three weeks, but gave way to the treatment ordered by Dr. Townsend. From that time till the present he enjoyed his usual health.

On October 29th, '61, he had a second attack of hematuria, which continued till his death. He usually passed about five pints of urine per diem, coloured with blood, but only in a very small stream, and at last only guttatim. There were no caluculi voided with the urine, but sometimes a thick substance which gravitated to the bottom of the vessel, which, from the *post mortem* appearance, very likely contained pus globules. He complained of acute pain over the region of the bladder when the hand was placed there, but had not the slightest pain when pressure was made over the lumbar or renal region.

On October 7th he was ordered stupes of turpentine, with gallic acid and Dover's powder, of each 10 grains, three times in the day (urine continuing as before); and pain, on pressure, still in the region of the bladder.

November 7th.—The pain continuing, was dry-cupped over the renal region, and ordered half a drachm of tincture of opium three times a day, with two bottles of soda water, and the gallic acid also continued, which treatment he used till his death, on November 14th; the amount of blood still continuing, and the pain over the bladder, though less than before, still felt on pressure. The only symptom showing that the disease was in the kidney was, that the blood was intimately mixed with the urine, and not coming away with the last drops, as it would do if from the bladder, and at the same time would not have been so thoroughly in solution.

*Post-mortem and pathological appearances.*—The viscera below the diaphragm healthy, with the exception of the kidneys. That on the right side being so much attached as to render its removal difficult. Its structure was much disorganised, and its bulk greatly increased and overlaid with adipose matter. That on the soft side was very large, and containing three sharp-pointed calculi, which I have, by tests, found to be oxalate of lime, with organic matter. Their size and shape must have produced great irritation to the kidney. They could hardly have been extracted, I think, by the ureter. The bladder was much disorganised by chronic cystitis; and at the right superior angle an ulcerated opening was seen, which would account for the great pain on pressure in the pubic region. The prostate gland was not much enlarged though the common opening of the vesicula seminalis, and vas deferens was very much increased in size. The ulceration in the angle of the bladder did not penetrate the peritoneal coat; and it was only in removing it that the urine escaped from the opening.

Dr. FINN exhibited a mulberry calculus about the size of a kidney bean.

The subject of this case was a female in an advanced state of pregnancy, who was brought to the Lying-in Hospital, suffering from pains

which were supposed to be connected with parturition. On making an examination, the calculus was observed to protrude from the orifice of the urethra. On its removal the pains immediately subsided.

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**DECEMBER 11th, 1861.**

DR. POPHAM, President, in the Chair.

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*Observations on some Cases of Diphtheria.* By DENIS CHARLES O'CONNOR, A.B., M.B., T.C.D., Professor of Practice of Physic, Queen's College.

Having recently been called on to treat some cases of diphtheria, and having heard that cases also presented themselves in the practice of other physicians in this locality, I thought it might be useful to bring the subject under the notice of the society, that we might not be unprepared, if this fearful malady should appear amongst us in an epidemic form. On former occasions, we had opportunities of observing the evils which resulted, when physicians were unacquainted with an epidemic at its first outbreak, as in the case of scorbutus or land scurvy, which existed for a long time before it was recognised by many physicians otherwise well informed, and who, consequently, could not apply the proper remedy, though so obvious, effectual, and of such easy application.

Every physician of much experience, has met with cases bearing a resemblance to diphtheria in its local characters, for instance, in malignant scarlatina, in some cases of typhoid fever, and in idiopathic pharyngitis. But these affections, though sufficiently dangerous, differ from diphtheria in some striking characteristics, first, in seldom, if ever, invading the larynx and trachea, though the inflammation is in such close proximity, whereas, in diphtheria, this constitutes its principal danger; secondly, in the great debility and prostration of strength, and occasional muscular paralysis in diphtheria, which are out of all proportion to the local inflammation, showing they do not exist to each other in the relation of cause and effect.

This disease was first described by Bretoneau, of Tours. He describes it as first affecting the tonsils, then spreading along the pharynx, and ultimately reaching the larynx, where it produced a disease identical with croup, with which it was confounded. He makes no account of the fever which accompanies it, nor its peculiar tendencies, and appears to look on diphtheria as altogether a local affection, which, if once checked, the entire disease would be removed. Recent observations of the disease, in England, has led to a different conclusion, or perhaps the disease assumed different types, at the two periods referred to. In the latter period, the croupy state of the larynx appears to be by no means so frequently observed, and many cases have succumbed, without any local disease to account for the death of the patient, the result manifestly depending on

a specific poison of the nervous system. The extreme debility, which appears to be the essential character of the disease, is shown, even in very mild cases, by weakness of the limbs; a tottering gait; temporary loss of vision; tinnitus aurium; difficulty of deglutition, and a nasal tone of voice, remaining long after the local affection has passed away. These facts, and the conclusions necessarily resulting, are of great importance in directing our attention, as much to the extreme nervous debility of the patient, as to the local affection of the throat. The following cases, though few, will serve to illustrate the principal points referred to in the foregoing remarks.

In October, 1860, a child, about 12 years of age, arrived from Dublin, at a boarding school in the neighbourhood of this city. On the following day, she complained of slight soreness of the throat and some difficulty of swallowing. It was ascertained, that before leaving Dublin, two of her sisters were similarly affected, and they were stated to be dangerously ill. When I saw her, on the third day of her illness, both tonsils were covered with a coating of lymph, and the whole of the pharynx was of a purplish red colour. She swallowed drinks with pain, but could not swallow solid food. There was little fever, the pulse was somewhat quicker than natural, but there was scarcely any heat of skin, and there was a peculiar expression of languor in her features, which were of a pallid hue. Her voice was nasal, resembling that of a person who had suffered from ulceration of the palate. After relieving the bowels, with gentle aperient medicine, I gave decoction of bark, with dilute sulphuric acid, in small repeated doses; ordered a gargle, containing a solution of chloride of soda, and touched the tonsils twice a day with a solution of nitrate of silver, fifteen grains to the ounce. I directed her to be supported with chicken broth, wine, and arrow-root, new milk, and barley water. She had much difficulty in swallowing the two former in sufficient quantities, and had, in a great measure, to depend on milk for her support. After some days the tonsils became ulcerated, with a fetid smell from the breath. Part of the fluid which she attempted to swallow, flowed through her nostrils, and she had constant vomiting. This was arrested by the application of a blister, to the epigastrium, and a few drops of laudanum. She subsequently complained of severe pain in the region of the stomach, so violent, that I suspected the presence of an ulcer in that organ.

When ill about three weeks, the ulcers threw off their sloughy character, and were beginning to fill up with healthy granulations; she was also able to take liquid food with more regularity, still there was extreme weakness of the pulse, a coldness in the skin, and languor in the countenance, not easily explained by the local affection. Her intellect was at all times clear, and she talked freely with her attendants, though her utterance was not distinct, owing to the paralysed condition of the

muscles of the palate. While in this state, she sat up in bed to take a drink, fell back, as if in a faint, and expired. Although the peculiar inflammation of the throat was severer in this case, than in any other of diphtheria which I had met, still, her death was attributable, not to this cause, but to the poisoning of the nervous system, which, I consider, to be the essential character of the disease. Two or three days after the arrival of the child, whose case I have just related, three other children, belonging to her class, became attacked with nearly the same symptoms, namely, constriction in the throat, difficulty of swallowing, with slight fever. In all three, the tonsils were covered with the same coating of lymph, and the pharynx more or less inflamed, and of a dark red colour. In two of these young ladies, the disease ran a rapid course, to a favorable termination ; the third was more tedious, still, the local affection was never so severe as an ordinary case of tonsillitis, or pharyngitis, but there was languor, debility, loss of appetite, and the peculiar voice to which I before referred. In about ten days from the commencement of the attack, this child had apparently recovered. Her throat was quite well, there was no difficulty in swallowing, still, the voice had not its natural tone, and there was great muscular debility in the whole body. When walking, she occasionally tottered in her gait, and felt a reeling in the head, which made her unwilling to leave her chair. She complained of motes flitting before her eyes, and sometimes lost her sight for several minutes, accompanied with a ringing in her ears of a most distressing kind. In this case, I examined the state of the urine, which contained no albumen. The child continued in this distressing state, nearly three months, although, during the entire time, her appetite was very good, and her general appearance showed no signs of delicacy. She finally recovered perfectly.

These cases clearly establish the contagious character of this disease, as all of these children, were, more or less, in contact with the young person first attacked, and no other case appeared subsequently in the school after their isolation. The last case I have referred to, shows in a special manner, the predominance of the nerve poisoning over the local symptons, as the nervous debility lasted long after every other symptom had disappeared. This should lead us to rely less on the statements of writers, who trust almost entirely to local applications, for the cure of this disease.

About the end of last October, I was called to see a child about five years old, labouring under symptoms nearly similar to those I have already described. During the first week, there was little to observe but the inflammation in the tonsils and pharynx, subsequently there was great debility, pallor of countenance, feeble pulse, and vomiting. At a later period, diarrhœa supervened, and there appeared but little hope of the child's recovery. However, by the constant use of stimulants, and

keeping her in the recumbent posture, she recovered, after a protracted convalescence; the last symptoms which disappeared, being the peculiar nasal voice.

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## TRANSACTIONS OF THE BELFAST CLINICAL AND PATHOLOGICAL SOCIETY.[a]

### NINTH SESSION, 1861-62.

*Case of Cataract.*—DR. BROWNE introduced a young girl, aged 14, from the country, labouring under cataract in both eyes.

He observed, that the case before the Society presented the usual appearance of congenital cataract, though the patient, up till two years ago, had enjoyed good sight; since that time the powers of vision had gradually declined, until now she could merely distinguish the outline of large objects, even when the pupils were fully dilated. No cause whatever could be assigned for the occurrence of the disease, as there had not been any injury or previous affection of the eyes. In his opinion it was the result of slow inflammation, and the consequent arrest of nutrition, just as, he believed, occurred in congenital cataract, either in utero or very soon after birth. Certainly it was very rare, he said, to see cataract occurring, as this had done, in a perfectly healthy young person, and where there had not been injury.

The operation he designed was that for breaking up and absorption—improperly called the operation for solution. He observed, that the needle—a very fine one—should be introduced through the cornea, and the capsule of the lens should be only slightly torn in the first operation, lest inflammation should be set up. In the future operation or operations the needle could be more freely used with comparative safety. Some weeks should intervene between the operations; indeed the needle should be only used afresh when absorption or the disintegration and disappearance of the cataract seemed at a stand still.—*26th October*, 1861.

DR. BROWNE exhibited a patient labouring under traumatic cataract. The capsule had been wounded by a blow from a hackle-pin; and spontaneous cure was now going on by absorption.—*2nd November*, 1861.

*Case of Enchondroma of Hand.*—DR. BROWNE presented the model of a hand, taken in plaster, and also the morbid specimen which he had recently amputated for enchondroma.

The patient was a woman, aged 64 years, from the country, near Belfast. She stated, that some 16 years since she had observed a small swelling close to the head of the metacarpal bone of great finger. This, she says, was entirely dispersed by treatment. Within the last two years, however, it had returned, and the swelling extended rapidly from that point to the rest of the hand, involving the metacarpal bones and the phalanges, with the exception of the distal phalanges of the thumb and little finger. The principal enlargement was on the back of the hand, where the tumour presented a somewhat unequal, glistening surface, the veins at some parts being tortuous, full, and enlarged. This tumour was elastic; and, at one or two places, there was a sensation of fluid beneath the touch. She came into hospital on the 4th; and on the 10th of September the hand was amputated three inches above the wrist joint, by the double flap of the integument and circular of the muscular structure. The stump, an excellent one, healed up kindly. Six weeks after the operation he saw the patient in excellent health. Indeed her health had not suffered much before, as she had not had very much pain—only neuralgic uneasiness arising from pressure upon the nerves.

On making a section of the tumour, and dissecting back the integuments, there was a very thin shell of soft bony structure, then cartilaginous structure containing gelatinous matter in cells. This portion very closely resembled boiled sago mixed with red wine. The entire normal structures of the entire hand had been destroyed. The metacarpal bones of the thumb and little finger were flattened, and changing into cartilage, the osseous structure having nearly disappeared.

Though the age of the patient, the rapidity of the growth, and resemblance of some parts of the mass to colloid cancer, might raise a doubt as to the true nature of the growth, he still thought the case one of enchondroma, rapidly degenerating—doubtless a rare affection, and not one of malignant disease.—*9th November*, 1861.

*Fracture of Clavicle.*—PROFESSOR GORDON exhibited a patient who had sustained a fracture of the clavicle at the junction of the outer with the two inner thirds. The outer fragment had undergone the usual dis-placement, inwards and downwards. He has maintained, for some time past, that in fracture of the clavicle the shoulder is elevated, instead of being depressed. In the treatment of this accident he does not push the shoulder upwards and backwards, as usually recommended, but depresses it. He places a very large pad over the lower part of the side of the thorax; along the arm and forearm an angular splint, well padded above, where it rests against the biceps muscle, and extending from the anterior border of the axilla to the hand. The lower part of arm and inner surface of elbow is then firmly bandaged to the large pad. The elbow joint being thus fixed, and rendered incapable of flexion by the splint, he next

elevates the forearm at the wrist, by a sling, which passed round the neck; and by so doing the shoulder is depressed and pushed outwards. In the present case this apparatus has succeeded admirably in maintaining accurate apposition of the fragments. It is simple in construction, easily applied, and not liable to become disarranged.—*23rd November*, 1861.

PROFESSOR GORDON introduced a patient whom he was treating for comminuted fracture of the clavicle.—*23rd November*, 1861.

The President then read his opening address, which had been deferred until this date owing to his unavoidable absence.[a]

*Compound Comminuted Fracture of the Tibia and Fibula of the Right Leg.*— DR. BROWNE read the following case :—

George Mayers, aged 18 years, a strong healthy young man, was admitted to the General Hospital on the 18th of October; three hours before, the wheel of a baker's heavy cart had passed over the right leg, about four inches above the ankle. Both bones were broken. At the posterior part of the leg a wound existed about an inch in length; but the bones did not protrude from this, though the bruised tissues did. The limb was put, upon the outside, in a padded splint, and flexed at the knee, and the wound covered by water dressing. Erysipelatous inflammation, with considerable serous infiltration, soon set in, and extended to the knee; and in a week after admission the integuments on the front part, over which the cart-wheel had passed, as well as the posterior wound, had sloughed, exposing the broken ends of the tibia, denuded of periosteum for about three-fourths of an inch. Various contrivances were adopted to keep, or rather to bring, the fractured ends in apposition; but this could not be accomplished. At this time the constitutional disturbance became great, and the suppuration copious; still it was determined to give him a chance of saving the limb. Stimulants and tonics were freely exhibited; and, for some days, considerable improvement took place. However, the sores soon after assumed a very sloughy, in fact phagedenic appearance, the constitutional irritation increased, and there was great infiltration of the entire limb up to the groin, with pain along the course of the saphena and femoral veins, upon pressure. At that time the fractured parts of tibia were exposed for an inch above and below, and a large slough had taken place in the back part of the limb, behind the seat of fracture. Under these circumstances, though the issue seemed very doubtful, it was evident that amputation must be resorted to, to save life, if possible. The operation was accordingly performed by me, on the 14th instant, by the double flap of the integuments and circular

incision through the soft parts, the bones being cut through three inches below the tubercle of the tibia. Three vessels were tied, and the stump was put up four hours after, with straps of wet lint. Besides the great serous infiltration of the limb, to which reference has been made, the veins were found to be greatly inflamed and blocked up by a clot. He had had, moreover, on two occasions, severe rigors—one a week, and another three days, before the operation.

The opium and quinine, with six ounces of wine, beef tea, &c., which he had been taking, were ordered to be continued. On the 18th the wound was opened for the first time. The stump did not show the smallest sign of any healing by the first intention; but, otherwise, did not look unhealthy. The infiltration of the limb had greatly subsided; and the pain, on pressure along the veins, was not so great as before. Opiated mercurial ointment was directed to be rubbed along the course of the inflamed veins, and the stimulants, opium, &c., to be continued. On the sixth day after the operation, he had a sharp rigor, which caused some apprehension. On the eighth, pretty free suppuration of the stump had taken place, and there had not been any return of the rigor. On the tenth, the last ligature came way, and the patient seemed improving. On the twelfth day after the operation, however, he had, in the course of nine hours, three severe rigors, followed by profuse sweating. On the thirteenth day, an increased discharge of pus occurred; and there was not any recurrence of the alarming symptoms which caused the dread of pyemia; and he was discharged, four weeks after the operation, with a good stump, and with completely restored health, which had been so much shaken by the results of his unfortunate accident. On the whole the case is interesting, as showing that young persons will survive operations frequently, even when performed under the most unpromising conditions.

The bones of the parts at the seat of fracture were found to have been greatly comminuted, stripped of periosteum, and, in fact, in such a state as to have afforded no chance of repair.—*30th November*, 1861.

*Case of Disease of Hand, requiring Amputation.*—DR. BROWNE showed the morbid parts, and gave the following statement of the case :—

Peter M'Caffrey, aged 54, previously of excellent health, and of temperate habits, was admitted into the hospital—first, in September, 1857, having had the middle finger of his left hand crushed between rollers, so much so that amputation of the part was performed by Dr. Browne, through the first phalanx. In five weeks he was then discharged, with the part quite healed up ; and he remained well till the month of August of the present year, when he sustained a kick from a horse on the old cicatrix, which broke up the remaining portion of the first phalanx, and drove the splinters into the palm of the hand. He was admitted into

hospital, when Dr. Murney removed the fractured portions of the bone, and took away the former stump at the metacarpo-phalangeal articulation ; the parts healed up, and he went out quite well at the end of a month. On the 12th of October he returned with the cicatrix completely opened, and presenting a most unhealthy phagedenic character, with disease of the metacarpal bone. Extensive sloughs, burrowing beneath the palmar fascia, took place, with great enlargement of the wound ; in fact the gangrenous state progressed, despite all treatment, till hemorrhage took place which could not be controlled, and rapidly reduced the strength of the patient ; this, combined with the excessive pain of the part, was quickly wearing the patient out, so that it seemed amputation was the only resource left, and for which the patient was most solicitous. Dr. Browne, therefore, amputated, a little above the wrist, on the 16th of November. The stump healed up quickly, and the patient regained his health and strength—the only retarding circumstance to his rapid convalescence having been suppuration of the glands in the axilla.—*30th November*, 1861.

*Compound Comminuted Fracture; Amputation.*—Dr. BROWNE exhibited a limb which he had to amputate the preceding week, in consequence of being completely smashed by a railway waggon which had passed over it. The operation was performed through the lower third of femur, by the double flap of integument, and circular incision of muscles—care being taken to make the anterior flap long. The stump promises to be an excellent one.—*30th November*, 1861.

PROFESSOR GORDON introduced a patient who had sustained an impacted fracture of the surgical neck of the humerus, together with fracture of the radius of the same limb. At the same meeting Professor Gordon showed an arm which he had found necessary to amputate for compound fracture at the elbow joint.—*30th November*, 1861.

*Epulis.*—PROFESSOR GORDON exhibited a specimen of fibrous epulis, and gave the following details :—

Ann Dyer, admitted into hospital November 9, 1861, aged 18, complexion florid, and her general health very good. About five years ago a small tumour appeared in the gum, opposite the second incisor tooth of the right side. At first this tumour grew very slowly, being at the end of three years scarcely half its present size. On admission into hospital the right side of lower jaw presents a firm oblong tumour, extending from the first incisor to the second molar tooth ; it is almost an inch in length, and fully three-fourths of an inch in depth, rising upwards almost to the level of the upper margin of the crown of the canine tooth ; it is not painful on pressure ; in colour a little whiter than the gum ; firm, and

slightly elastic; its surface perceptibly irregular from numerous small protuberances. Around its margin it overlaps closely the neighbouring gum and teeth; the first molar tooth is directed more inwards than that of the opposite; but this seems due rather to crowding of the teeth than to displacement by the tumour, as none of them are in the slightest degree loose. There is increased vascularity beneath the mucous membrane, at its reflection upon the lip, immediately below the tumour.

On attempting to remove the tumour with the scalpel osseous substance was encountered. The scalpel was, therefore, laid aside, and the cutting forceps applied, one blade above and the other below the tumour. The mass was thus easily and perfectly detached; and were I called upon to perform again a similar operation I would use the cutting forceps. The fang of the canine tooth was denuded almost to its point, and an osseous spicula, about one-eighth of an inch in diameter, divided. This spicula projected fully one-fourth of an inch into the tumour.

Although the alveolus between the canine and second incisor tooth seemed sound, yet, from the recognised tendency of such tumours to repullulate, the incisor and canine teeth were extracted, the intervening alveolus removed, and the surface touched, lightly, with potassa fusa. On examination of the tumour, after removal, we find it firm, slightly elastic, colour white; its surface perceptibly uneven, with a fibrous section, presenting a groove corresponding to the fang of the canine tooth; and that its point of attachment was much less than would have been supposed from the external examination. When cut into, a small cavity was exposed, filled with sebaceous-like matter, which, when examined by the microscope, is found to consist of plates of cholesterine, oil globules, granular matter, and a few epithelial scales. The tumour itself seems, on section, to be decidedly fibrous, yet the microscope shows it to belong rather to the fibroid than fibrous tumours. The several cavities containing sebaceous-like matter are, I think, the follicles of the gum distended by a secretion which has undergone degeneration. If we give to this fact its due weight I think it will lead us to infer that the tumour involves, and has its origin, simultaneously in the gum, periosteum, and alveolus.—*30th November*, 1861.

*Disease of Femur.*—Dr. BROWNE exhibited a patient labouring under disease of the left femur, and made the following statements regarding the case :—

The lad, now eight years of age, had, till four months since, excellent health, and is descended from healthy parents, not related by blood. At the time referred to he had a fall upon the hip, but which neither caused fracture nor luxation; indeed he continued to walk for a week after the fall without suffering pain, and without lameness. He then began to keep his bed, and suffered, for several weeks, great pain, with much swelling around the hip, and of the thigh also. The medical practitioner who

saw the case in the country, supposed that suppuration was about to take place. By degrees the pain subsided, and the swelling diminished; but then, for the first time, some five weeks' since, great shortening of the limb was observed to have ensued. When the boy was brought to the hospital, on the 4th instant, he (Dr. Browne) diagnosed spontaneous luxation at hip joint, with disease of the shaft of the femur. He said he was led to believe, from the history of the case, that acute hip-joint disease had resulted from the fall; that dislocation ensued, after some weeks of destructive inflammation; and that the disease of the shaft of femur had occurred about the same time.

The present condition of the patient, he said, is obvious. The femur is displaced upwards; the head and neck partially absorbed, are resting on, and nearly fixed to the dorsum of the ilium; the shortening amounting to fully three inches; the shaft of femur and soft parts are greatly enlarged, and the integuments have large veins ramifying extensively through them. The patient's health is good; and there is not the smallest pain on pressure, or on attempting motion of the hip. Still, even with these negative signs, he could only arrive at the conclusion that cerebriform disease of the femur is present, and that it would eventually prove fatal. The progress of the morbid growth had not lately been rapid; but the members of the society were well aware that in many of these cases the disease, for some time, seemed almost stationary, when all at once it advanced with great speed; and finally, having burst through the integuments, it soon destroyed the life of the patient, either by the constitutional irritation set up, or, in some instances, by the exhaustive drain of repeated hemorrhages.

He concluded by stating he would keep the patient in hospital for some time, would watch the progress of the disease narrowly, and would report the issue to the Society.—*7th December*, 1861.

*Extroversion of Bladder, &c.*—Dr. Browne introduced a lad of 14 years of age, who had congenital absence of the anterior walls of the lower part of abdomen and bladder; the back part of the bladder projected forward, and exhibited the mucous surface to the extent of about an inch and half square, with the ureters opening at the lower portion. Beneath this the rudiment of a penis appeared, the corpora cavernosa separated above, with a small opening in the sulcus, between the bladder and back of penis, seemingly the mouth of the common seminal ducts. The testicles were fully developed and enclosed in the scrotum, which approached to the normal condition beneath, but separated above, passing to each ascending ramus of the pubis, the two portions being united by a thin integument and membranous band. The pubes were separated at the symphysis, the interval being filled by strong ligamentous structure. There was no trace of a urethra, except what has been referred to as the openings of the ejaculatory ducts.—*7th December*, 1861.

*Excision of the Tonsils.*—DR. BROWNE introduced a young female, 18 years of age, from whom he had excised greatly enlarged tonsils, and exhibited the hypertrophied parts.

This young girl was of small growth, and not at all developed according to her age. She had suffered, for several years, from repeated attacks of inflammatory sore throat; and latterly the enlargement of the tonsils had become so great as to interfere materially with deglutition, speech, and breathing; and her general health had suffered also. The catamenia had never been properly established, and the mammæ were undeveloped. Dr. Browne regarded the operation of removal as established in such cases; and his experience of many cases was, that within one year after the excision of the hypertrophied tonsils, in young females, the system became fully developed, and the health quite re-established. He considered the operation quite safe, provided the surgeon took care not to cut too deep, or outwards; but having drawn the tonsils towards the mesial line, he carried the knife—probe-pointed—with its edge directed forwards, and its flat pressing against the arches of palate, completely through the enlarged mass. Very little hemorrhage had occurred in his practice, and he had never witnessed any unpleasant results.

With regard to the notion entertained by some authors that removal of the tonsils would interfere with the sexual reproductive powers, he said, in the first place, the tonsils never were, and *could not* be excised; it was only the *morbid growth* or *hypertrophied portion* that was removed; and in the second place, he contended that the removal of these morbid growths, instead of interfering with sexual development, actually had the very opposite effect. He concluded by saying that he strongly recommended the operation in all suitable cases—such, in fact, as the one he had introduced to the notice of the society.—*7th December*, 1861.

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*On the Restoration of Congenital Fissure affecting the Hard and Soft Palates, with a comparison of the resources individually offered by Prothesis and Autoplasty.* A letter addressed to Professor Lawrence, by DOCTOR DEBOUT.

DEAR SIR,—It was not permitted your illustrious friend, M. Roux, to complete the work in which he proposed to make us acquainted with all he had seen or done of notable utility during his long professional career. But he had at least the consolation of terminating that portion in which he took the greatest interest on account of the large share he took in its elucidation, and which we have termed *restorative surgery*.

I shall not here examine whether our skilful surgeon has not omitted, in spite of the large space allotted to this subject, the consideration of

some of the affections naturally allied to it. He has himself taken care to obviate any reproach upon this account, by informing us that he writes more to demonstrate the really valuable assistance offered by those applications of restorative surgery which he has attempted with the most success, than to compile a complete treatise upon the subject.

And thus, in alluding to vesico-vaginal fistula, in the treatment of which restorative surgery has given such brilliant results in the hands of M. Jobert, M. Roux, not taking sufficiently into account the experience of others, says, " There are other restorations of too recent a date, and so lately instituted, as not to allow of their having been performed a sufficient number of times to enable us to pronounce upon their proper value, or to appreciate the especial worth of the different processes of which each is capable."

But we may justly criticise our illustrious master as to his voluntary silence regarding the value of such prothetic apparatus as industry, alone and unassisted, has succeeded in creating, to remedy deformities which even his skilful hand had failed to remove. Restorative surgery being, according to the definition of M. Roux himself, that part of our art especially destined to restore deformed organs, or those having suffered a loss of substance more or less considerable, to such a condition as will enable them to accomplish their natural functions; our art would often fail, to bring about this result, were we to omit the study of the real resources offered to us by prothesis.

For example, when the mutilation is confined simply to the soft parts, and the loss of substance is not too considerable, we are able, by ingenious processes, to render an increased mobility to the neighbouring parts and thus bring them into contact. It is no longer the same when the loss of substance affects the bony structures; here coaptation is no longer possible, and synthesis must give way to prothesis. Synthesis and prothesis are but portions of the same whole, and has not M. Roux, in consecrating an entire volume of his work to restorative surgery, and still confining himself to the consideration of synthesis alone, been guilty of a serious omission? It is a doubt which I beg your permission to express.

For some considerable time we have lost no opportunity of impressing upon surgeons the loss accruing to science, from their abandonment of all study of mechanical apparatus to instrument makers and the patients requiring them, and we wish to continue our task.

Operative surgery must at length learn to take into account the resources offered by prothesis. According as this latter becomes capable of repairing greater mutilations, the operative surgeon will become more enterprising. But a few years back would any surgeon have dreamt of removing the two superior maxillæ.

But at the same time that the operator may, in the present day, become more daring, owing to the abundant means now offered for filling up the

breaches that he makes for the safety of his patients, he ought also to learn to give place to prothesis, so soon as this latter has attained a sufficient degree of progress to accomplish the end in view.

Regarding prothetic apparatus, their trial is in all cases inoffensive, this is far from the case in respect to the applications of autoplasty, which, to say the least, in cases of non-success, leave the loss of substance greater than before.

Therefore, would it not be wiser to commence by a trial of these means, in all cases where their success is probable or even possible, instead of recurring as a last resource when we have already rendered its task more difficult? Such is the question which I desire to lay before you, as the person whose long experience has most fitted, to give us a solution.

I have chosen for my subject the restoration necessitated in the buccal cavity by the congenital fissure of the palate, implicating both hard and soft structures.

M. Roux, in his *Conservative Surgery*, has shown what resources are offered to the surgeon by operative interference. Allow me in turn to lay before you the real value of the means that prothesis affords us in the treatment of these affections.

I have neither the authority nor the talent of demonstration possessed by our professor; consequently I shall speak by facts, and leave them to plead the cause which I defend.

I have taken for example the most complicated of these cases, viz., a case in which the arrest of development affected the lip, the palatine arch, and the velum pendulum palati, constituting the deformity known with us as *gueule de loup*. I shall thus have occasion to indicate the share which in restorative surgery falls to the lot of synthesis and prothesis individually.

Operative surgery, by borrowing the required tissue from the directly adjoining parts (l'autoplastie par glissement), easily succeeds in closing the labial fissure, and in restoring the nose to its normal form. When this autoplastic operation is performed during the first months of existence, as is now most frequently the case, the influence of the simple restoration of the lip causes the gradual disappearance of the breach in the alveolar portion of the maxilla.

Such is not the case with the fissure of the bony palate; the palatine cleft remains unchanged. Nevertheless, were it possible to perform the operation of staphyloraphy at the same epoch as that for hare-lip, the union of the soft parts would exercise the same influence upon this fissure as upon that of the dental arch; the separated portions of the hard palate would so far approach each other as to leave but a slight longitudinal fissure which it would be easy to close.

But staphyloraphy is not an operation which can be performed upon very young subjects. In the words of M. Roux, " That it may be

performed with precision and employed with success, the patient must possess a strong will and a firm resolution, he must have the sentiment of his infirmity and a lively desire to get quit of it ; he must be possessed of the courage necessary to affront the pain ; and be capable of presiding over himself during the after treatment ; he must also have sufficient force of character and patience to endure certain privations necessary to ensure success.

" Nothing can be commenced, pursued, or terminated, without his concurrence, without his will, without his participation. The degree of reason and the force of character possessed by a person of from 18 to 20 years of age is no more than is necessary ; but it is sufficient ; and we ought to profit by this the first favourable moment, in order to afford as soon as possible, to such as suffer from the errors of nature the benefits which art may be able to procure them. Waiting a few years later would only give perchance to our patients a greater resignation and a more firm courage, without placing them in other respects under more favourable circumstances." We have preferred giving the words of M. Roux, himself, in order that we might not be taxed with having, in the interest of our cause, retarded the epoch favourable to the intervention of our art ; and exaggerated the moral qualities necessary in a patient who would undergo the operation of staphyloraphy with a prospect of success.

It is unnecessary to describe the operative processes of M. Roux, for the restoration of cleft palate, inasmuch as they have become classic, we shall simply indicate the results which he obtained in those cases where the cleft embraced both hard and soft structures—the only class of cases occupying our attention at present.

Of the 51 cases of complete cleft operated on by M. Roux, four underwent the operation a second time, and only one out of these four was cured by the second operation. He obtained occlusion of the cleft in rather more than half of the cases operated on, that is, in 26 of his patients.

Our skilful surgeon had just reason to be satisfied with such a result, from the fact, that the interval separating the two portions of the velum pendulum palati is generally much greater, than in those cases where the cleft affects only the latter organ. In fact, M. Roux, in most of his cases practised the separation of the soft from the hard palate.

In terminating his work, M. Roux makes the following remarks :—" In this class of cases we must not understand by success or favourable result the simple union of the two portions of the velum pendulum palati. After having obtained this result, which is ever incomplete, certain phenomena resulting from the simple efforts of nature are soon to be observed. There should be a spontaneous diminution of the distance between the two portions of the bony palate, after which, should there still exist an opening forming a communication between the mouth and nasal cavities, surgery may again be called on to interfere, but by other than the former means ;

we may either attempt the definitive occlusion of the still existing aperture by means of palatoplasty or we may simply maintain it closed by means of an obturator."

We observe that M. Roux is at length obliged to call in the aid of prothesis; but what services did these mechanical apparatus render to his patients? He is completely silent upon this matter, although he must have had many opportunities of verifying the results of their employment.

Let us leave for the present this point of the question, in order to occupy ourselves exclusively with the 25 individuals to whom operative surgery was of no utility, those whom both surgeon and surgery abandoned to their sad fate. We shall mention the services which prothesis is able to render them, and, after having verified their reality, we shall be allowed to establish a comparison between the resources, so widely differing, of these separate portions of restorative surgery.

M. Roux is the last surgeon who could plead ignorance, as to the remarkable progress then realized by prothesis in the treatment of congenital cleft of the velum pendulum palati. In 1845, M. Stearns, an American surgeon, exhibited to him and to his colleagues at the Academy of Medicine, the services which a well conceived and adapted apparatus was capable of rendering to individuals affected with this vice of conformation.

The history of this surgeon is full of interest. Born with cleft palate, and arrived at the age of choosing his profession without having received any efficient aid from the numerous practitioners of his country, M. Stearns, fixed upon the study of medicine. With the old proverb, "Aide-toi, le ciel t'aidera," before him, he hoped by his own efforts to arrive with more certainty at a means of remedying his infirmity.

The physiological study of the vocal apparatus soon instructed him as to the role of the velum pendulum palati in the act of phonation, and M. Stearns, being gifted with great mechanical aptitude, was not slow in laying his hand upon the substance which was to permit him to realize his desire. Some attempts had already been made with this end in view. Nasmyth, dentist to her Majesty Queen Victoria, had constructed an obturator, the posterior portion of which was composed of gold plates, imbricated one upon another like the scales of a fish. This disposition gave mobility to his apparatus, but its weight was too great to allow of its being easily raised by the column of air as it escaped from the glottis in the act of phonation. M. Stearns had the happy idea to substitute gutta percha for the metal, and, by an ingenious combination of plates of this substance, he succeeded in constructing a light apparatus, which answered very well its destined purpose.

Unfortunately caoutchouc, in the natural state, does not possess sufficient resistance to the action of the agents, more or less destructive, of the buccal cavity—viz., animal heat, acid secretions, and alimentary deposits.

M. Stearns was consequently obliged to renew frequently his artificial palate; nevertheless, the greater difficulty was overcome, and the mechanical combination already arrived at, and it was not long before a valuable discovery came in to crown the efforts of our *confrère*, by enabling him to bestow upon his artificial apparatus the wanting qualities. The vulcanization of caoutchouc allows it to remain in the mouth for months without alteration, and, at the same time, in no way interferes with its flexibility or lightness.

If the apparatus realized by M. Stearns was not appreciated by M. Roux, its importance did not escape the sagacity of Vidal de Cassis, inasmuch as we read in the edition of his work upon *External Pathology and Operative Surgery*, which followed the presentation of M. Stearns at the Academy :—" When the instrument is adapted, M. Stearns speaks absolutely as if the structures of his palate were in a state of perfect integrity, but upon its removal his voice assumes all the characters special to persons labouring under cleft palate, and his language becomes unintelligible." He further adds :—" If this instrument can be fixed so that there shall be no danger of the patient's swallowing it—if its attachment to the teeth does not loosen them—if, in reality, its presence in the buccal cavity be not irksome, and if its influence upon the voice and pronounciation be such as the experiment made upon himself, by this American surgeon, seems to prove, we might, I believe, dispense with perhaps the greater portion of the organic reparations at present practised upon the palate."

On his quitting this country, M. Stearns failed to leave with us here in France a model of his apparatus; consequently, the instruction that he came over to afford us as to his new application of prothesis was lost, and his discovery would still have been buried in the archives of science had it not been for a distinguished dentist whom we possess. M. Prêterre, upon settling amongst us, undertook to demonstrate all the reality of buccal restorations by prothesis. His success has earned for him the friendly esteem of our most eminent surgeons. In fact, M. Prêterre came forward with a generosity doing him infinite credit, in order to furnish us publicly, upon our hospital patients, the proofs of what this branch of art is capable; and there is at present scarcely an hospital surgeon who has not in his wards an example of the value of prothesis in buccal restorations. Here it is a superior maxilla, removed in totality—there an inferior maxilla, the anterior portion of which has been resected; elsewhere a cleft palate, now affecting the velum pendulum palati; now the bony palate; and now all the structures indiscriminately, which we find restored by the ingenious application of prothesis.

I have also taken advantage of the zeal of Monsieur Prêterre in the present instance. Having encountered an old patient of M. Roux, upon whom he had performed, unsuccessfully, the operation of staphyloraphy,

I entreated M. Préterre to furnish me with the proof of the progress he had made, and of the improvements which the models created by M. Stearns had undergone at his hands. The following are the notes of the case :—

*Hare Lip, complicated by Congenital Cleft, affecting both Hard and Soft Palate—Restoration of the Lip at the age of six weeks—Unsuccessful Attempt at Staphyloraphy at the Age of Thirty—Applications of Obturators with movable velum.*

Lemaitre, *employé*, 54 years of age, born with a fissure affecting the left side of the upper lip. The labial fissure was accompanied by a large cleft of the hard and soft palate. His infirmity hindered him from taking the breast, and it was some time ere a suitable means of feeding him could be found. An ordinary tobacco-pipe was first employed; the bowl being filled with milk the thumb was placed upon it, and the stem laid upon the base of the tongue, when, by alternately lifting and replacing the thumb,

Fig. 1.
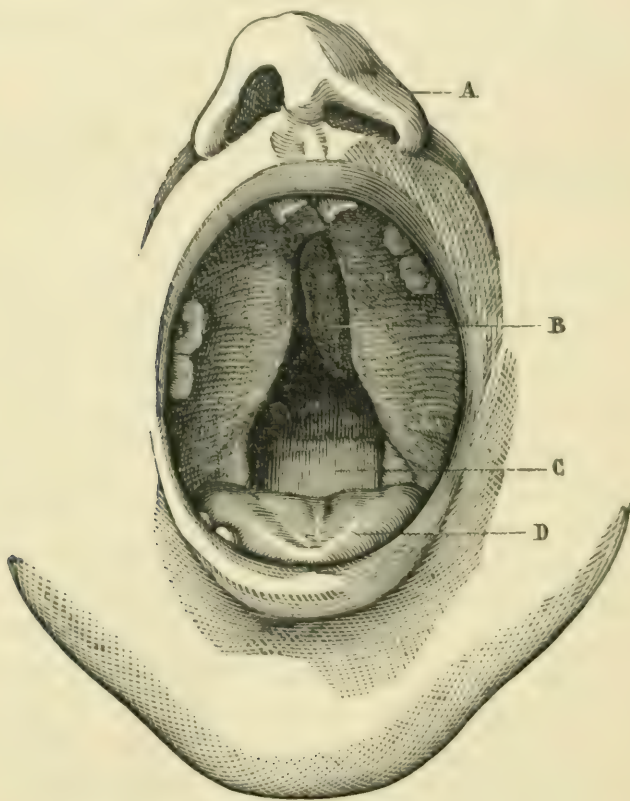


one was able to control its exit. At a later period a small bottle was employed in the following manner :—It was filled with milk, and a morsel of sponge the size of the little finger, and about two inches in length, was attached by means of a piece of linen to its orifice. With the aid of this

sucking bottle Lemaitre was reared, but not without difficulty, and consequently his mother eagerly accepted the operation immediately upon its being proposed. The restoration of the hare-lip was attempted with full success at the age of six weeks; but, the surgeon not having incised sufficiently the left nostril, Lemaitre was left with that side of his nose much flattened, as may be observed by the wood cut A, left nostril, which has remained flattened, owing to the insufficient division of the upper portion of the nasal fissure. In the anterior portion of the palatine fissure the vomer, B, is observed fixed to the left maxilla. The distance separating the two portions of the velum pendulum palati is much greater than usual, owing to the unsuccessful attempt of M. Roux at staphyloraphy. At the back of the mouth we may perceive a kind of muscular layer, C, projecting forwards, especially during the act of deglutition. It then seems as if the posterior pharyngeal wall (under the influence of the contraction of the pharyngo-staphylinus, or middle portion of the palato-pharyngeus) is projected forward as if to close the existing cleft.

Inhabiting the country, and occupied with field work, he felt less the inconveniences of his infirmity than he would have done had he dwelt in a city, and been engaged in an occupation requiring more frequent intercourse with his fellow-workmen. But still this man, who is very intelligent, acutely remarks, that the country people being less intellectual than townsfolk, he frequently had much difficulty in making himself understood by the former; and, on this account, he decided upon taking a situation of shop-boy at Havre; and it was in this place that M. Isidore Geoffroy Saint Hilaire, in the year 1847, proposed to bring him to Paris, in order that he might be operated on by one of our skilful surgeons. The mockeries of which he was from time to time the object, and especially the desire to be able to speak as distinctly as the rest of us, induced him eagerly to accept the friendly offer of the illustrious naturalist.

Lemaitre, on his arrival in Paris, was immediately confided to the care of M. Roux, and placed by him in his ward of St. Marthe, at the Hotel Dieu (No. 7). After the usual preparatory treatment, M. Roux performed the operation of staphyloraphy. Three sutures were applied, and the union was so rapidly accomplished that, at the expiration of 48 hours, M. Roux thought himself warranted in removing the sutures. That he was too hasty was proved a few hours later by the re-separation of the flaps, thus reproducing the fissure, and leaving the infirmity greater than before.

Immediately after the removal of the sutures a glass of wine was given to the patient, and Lemaitre, who up to this time had been perfectly free from fever, now began to suffer from quick pulse and other signs of an alteration of his health. Under these circumstances what influence must we attach to the moral effect of the disappointment in seeing all his hopes destroyed?

The fact is that, under the influence of these exciting causes, an erysipelas

of the scalp manifested itself upon the fourth day following the operation, and became so intense as to necessitate an incision behind the right ear. This attack of erysipelas was the principal cause of his not undergoing a second operation. Immediately upon his recovery he quited the Hotel Dieu.

Lemaitre, ashamed of returning to Havre still suffering from his infirmity, and having relations in Paris, preferred staying here, and it was not long ere he found employment. A few months since, coming by accident across this man, it occurred to me to make use of him in judging the value of prothesis in cases of cleft palate affecting simultaneously the hard and soft structures, and I conducted him to M. Prêterre. The wood-cut Fig. 1, indicates the extent of the lesion left for this dental surgeon to repair.

On the 1st of November, 1861, M. Prêterre adapted the first model, a copy of which we adjoin :—

Fig. 2.
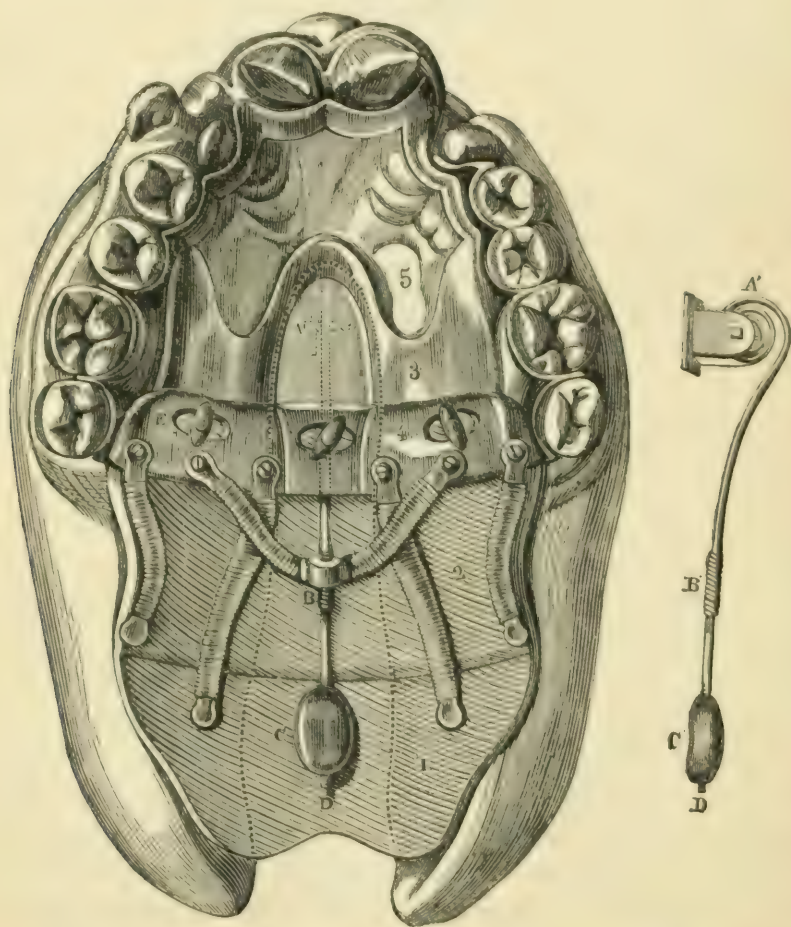


*Plaster Cast of the superior Maxilla of our Patient, and Model of the Obturator destined to close the enormous Fissure.*

The plaster cast indicates the irregularity in the position of the teeth,

the incisors and canines bearing especial evidence of the congenital lesion. The fissure is long, large, and gaping, commencing at the union of the anterior third with the posterior two-thirds of the bony palate, and then dividing the velum pendulum palati, so as to suppress the uvula, and leave intact only the anterior pillars. Its limits are denoted in the plate above by the dotted lines.

The obturator is summarily composed as follows :—A metallic plate (3) is exactly moulded to all the inequalities of the remaining palate, and nicely adapted to the teeth, sending out prolongations in the dental interstices, in order to give fixity to the apparatus. Allow us here to mention, as a peculiarity, that in this case the plate of gold is cut out in such a manner (5) as to leave uncovered the gustatory papillæ, situated behind the incisors. But this disposition is not always, or even often, practicable, owing to its interference with the solidity and adherence of the apparatus. To the posterior border of the plate (3) is fixed another metallic rim (4), by means of three tenons turning on their axis, fixed upon the plate (3), and fitting into mortices of the plate (4). These tenons and mortices are indicated by the letter (E). It is between the plates (3) and (4) that the flexible velum of caoutchouc (1 and 2) is fixed. But the plate (4) serves another end besides the fixation of the artificial velum— it affords support to a whole system of springs, maintained in place by six screws, three on each side.

The caoutchouc, being moulded upon the soft parts, and to the edge of the fissure, presents different degrees of thickness, necessitating the employment of springs, differing in their force according as the caoutchouc differs in thickness. These springs may be enumerated as follows :—In the median line is observed a pendulum or needle-spring (C C), the lentil or weight of which may be made to approach or recede from the centre of oscillation by means of the screws (D D). The force of this spring is considerable—it is due to the action *of a tempered gold wire*, arranged in the form of a spiral (A A), and fixed to the upper surface of the plate (3). The energy of this spring may be further modified, either by loosening the spiral or by changing the position of the nut working upon the screw (B B) ; the mobility of this nut is itself regulated by a flat spring, twice turned upon its horizontal axis. Further outwards, on either side of the spring (C), we have a flat spring of tempered gold wire. These springs, attached to the plate (4) at the junction of the external with the middle third, are carried outwards and far backwards, to be fixed to the thinner portion of the caoutchouc ; and, lastly, we have at each outer edge a spring of the same nature, but much shorter, and corresponding to the thicker portion of the caoutchouc.

This model had perfectly succeeded in a case of M. le docteur Cornag, of Neufchatel ; and in the month which has now elapsed since this apparatus has been worn by Lemaitre, with the assistance of an hour's daily exercise,

superintended by M. Prêterre, he already speaks with surprising ease. This rapidity of result is not usual, and depends upon the great intelligence and tenacity of the patient.

Inasmuch as M. Prêterre shortly intends to read before the Academy of Medicine a paper upon the apparatus destined to remedy congenital cleft palate, and on the special education necessary, as part of the treatment in such cases, I shall not enter upon this subject, but content myself with the mere mention of the good results I have witnessed.

There is, however, an error which I should wish to point out—an error under which the greater number of medical men still labour—and that is, that so soon as the artificial palate shall be adapted, the subjects of congenital cleft palate should be able to speak immediately, and correctly. By promising such a result to their patients, they lead them into serious error, and cause much bitter mortification to the artists undertaking the prothesis of this deformity.

In order to understand this fact, we have merely to call to mind the altered conformation of the different parts of the vocal apparatus, and the rôle which they are suddenly called upon to perform.

The upper lip has, in point of fact, been restored—that is, the fissure which it presented no longer exists, but the labial tissues are far from being normally organised. The muscular tissues have suffered in their development; it is less abundant at the point of reunion; and this portion of the lip consequently possesses less mobility; moreover, there exists almost invariably at the inferior extremity of the cicatrix a notch more or less evident. From these modifications it happens that, whenever individuals who have been operated upon for hare-lip pronounce labial sounds—as eu, ou, &c., the under lip takes more than its share in the movement; and, besides, there is an effort to close the notch or slight remnant of the ancient fissure.

The conformation of the palate is not less vicious; the separation of the bony halves of this arch enlarges the buccal cavity, and diminishes, in a relative degree, the nasal fossæ; and it is evident that the application of an obturator can only close the communication between these cavities, and in no way remedy the modifications depending upon the change in their relative capacity; and it is this alteration which especially influences the tone of voice, which most frequently is, in these cases, snuffling, especially when the nostril remains flattened.

Lastly, we arrive at the rôle required of the artificial velum pendulum palati. The mechanical problem was difficult to resolve; for, although the plate of caoutchouc is as soft and flexible as the natural soft palate, it is unprovided with muscular action. Here it was that the artist had to call to his aid all his ingenuity: he had here to create a factitious force, which could raise the velum to the height necessary for the act of phonation. M. Prêterre, in the apparatus designed in the present paper,

has attained this object by, in the first place, giving the plate of caoutchouc a greater thickness at its base ; and, secondly, by the application of a series of gold springs, which he has succeeded in rendering as flexible as steel.

When one reflects upon these modifications, as well organic as prothetic, and the influence they necessarily exert upon the phonic apparatus, one easily understands that the individuals suffering from this infirmity, although possessing the most complete apparatus, must still devote themselves to an especial study, and that the time necessary should be not less than from three to six months ; the result is the more complete, as the lesion is less profound, and the individual possessed of greater perseverance.

Now that we have established by facts the reality of the resources of prothesis in the treatment of congenital cleft palate, it may seem that we have now only to trace the comparison between the advantages offered, on the one hand, by the new apparatus, and, on the other, by operative surgery.

But, previously, we must mention the distress occasioned by this vice of conformation, in order that it may be placed in the balance against the inconvenience of obturators, and the dangers of autoplasty. This view of the question is completely neglected in the classical works on the subject, notwithstanding the influence which this point ought to have in determining the surgeon to interfere, and the weight it should exert in the choice of means to be employed.

The distress occasioned by congenital cleft of the palate varies greatly at different periods of life. At the age favourable to surgical interference, the infirmity merely affects the organs of speech ; of whatever extent the cleft may be, these individuals swallow with the same facility as if the internal conformation of the mouth was normal. This is by no means the case at birth.

Cleft palate, affecting all the structures, is one of the deformities most directly compromising an infant's existence, by the obstacle it offers to suckling.[a] The silence maintained by authors on this subject, as well as upon the artifices to be employed in these cases, induces us to reproduce the first portion of a very interesting paper addressed by Eustache (de Beziers), in 1778, to the ancient Academy of Surgery. This paper would have remained unknown had not one of our most distinguished rising surgeons, M. Verneuil, undertaken to scrutinize the archives of this celebrated association, and to publish such fragments as might be useful to science. Although his publication was arranged with an especial view to the history of Staphyloraphy, our sagacious *confrère* has taken care to

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[a] In the 15th number of the Compendium de Chirurgie, which has appeared since the termination of this article, we find the following assertions :—" Congenital division of the velum pendulum palati does not compromise existence." . . . . . . . . " One ought not, in these cases, to reckon upon the applications of prothesis."—(Page 754). These lines furnish us with further proof of the importance of our study.

point out the value of this communication regarding our present subject. See, here, the entire document. We must at present notice that Eustache employs an improper expression in speaking of the vice of conformation as *absence of the velum pendulum palati*. This error, as indicated by M. Verneuil, depends upon the smallness of this organ at birth, rendering the two portions but slightly visible. Having mentioned this error, we return to our citation.

*Observations on Several Cases of Children Born with the Velum Pendulum Palati Absent : followed by an Essay upon a Means of Reuniting Recent Divisions of that Organ.* By Eustache de Beziers.

" . . . Every one is aware that the soft palate is especially destined to moderate and direct the descent of food and drink, and to hinder them from ascending into the nasal cavities; that it further serves to direct the air expired; that the act of swallowing depends on it, as well as the charm of the voice and the sonorous articulation of words. But if this fleshy partition is so essential to the adult, it is not less so to the new-born infant, to enable it to suck from its mother's breast the vital juice so admirably elaborated in its veins by Nature. The case of one of my own children, observed with all the exactitude that paternal tenderness could inspire, will furnish evident proof :—

" Obs. I.—*First Observation made upon one of my Children, Born with complete Absence of the Velum Pendulum Palati.*—In 1778 my wife was safely confined with a male child, which appeared, at first sight, well developed. Some little time after birth a little syrup was given him; this he had scarcely tasted when he was suddenly seized with a convulsion, almost general. I attributed this accident to the entrance of a few drops of the liquid into the larynx. Recovered from this disastrous accident, he was put to the breast : he seized the nipple with avidity, quitted it, reseized it with uneasiness. Others were presented to him, which he seized, but always with the same agitation, and without success. I was too deeply interested in the conservation of this tender being not to occupy myself seriously with the discovery of the cause of such an effect. I examined the mouth, and at first sight discovered no anormality in its structure; but as the accidents still persisted, I examined the buccal cavity a second time, and at length perceived at the entrance of the throat an extraordinary opening, which led me to the conclusion that my son was born without the velum pendulum palati.

" However, two days had already elapsed, and, *erat periculum in mora*, I therefore decided to administer a small spoonful of goat's milk : of this he swallowed some few drops, but the greater portion returned by the nostrils. I repeated this method, but with little success. On the fourth day of all these perplexities I imagined the use of a long and thick brush, which I made of linen. This I soaked in milk, and presented to him; he seized

it, and was able to suck it. This little artifice having always succeeded it was employed for seven consecutive days. Emboldened by this success, I made a second brush, this time in the form of the nipple, and this artificial nipple enabled him to become accustomed by degrees to the natural one; and ten days afterwards he began to take the breast, but always with much difficulty and extreme slowness, and this caused him to waste away most pitifully.

" Within the space of five months he had ten wet nurses, and all avowed to me that this unfortunate infant, although applied to the breast for hours together, did not succeed in extracting half an ounce of milk in the whole day. Hence the almost total suppression of the urine and other excretions. Another nurse now presented herself, and animated by interest—that great and powerful motive—she engaged to take charge of this infant, in spite of the worry and embarrassments attending him. She had him under her charge during fourteen months; but, as she has since admitted, becoming wearied, and observing the daily wasting of this poor infant, she contrived in order to shorten her labour, without losing her salary, to feed him with a pap composed of equal parts of milk and water sweetened; and this method was secretly followed during thirteen of the fourteen months of her nursing. But this did not prevent her from applying him to the breast, in order to screen her conduct; but this application was always followed by convulsions and violent fits of coughing.

" However, he lived, and was weaned at the nineteenth month, when, to our great consolation, our infant got gradually stouter, his flesh became firmer, and his eyes expressed more animation, fluids were more rarely returned by the nose, and in the space of three weeks there was such a change in his health as I had not dared to expect.

" You easily understand my anxiety to discover the cause of such a happy change. I found it in the commencing development of the soft palate. This development daily increasing, things took their natural course, and my son was in a great measure delivered from the fiercest accidents which had so much alarmed me. From this epoch the deglutition of solids has always been accomplished with facility; but this has not been the case with fluids, especially in the case of water, the swallowing of which has always been laborious. The only liquids passing with less difficulty were red wine and muscat, their spirituous quality putting, without doubt, the organs of deglutition in action. We must further remark that the simple fact of inattention on the part of my son, either in eating or drinking, or the fact of the slightest obstacle touching the laryngeal orifice, produced, on the instant, a violent fit of coughing, which shook the whole of his muscular system. Lastly, we must mention that this tender infant, having without doubt learned the injurious results of the rapid descent of liquids, retained them in his mouth in order to swallow them insensibly, drop by drop, as it were, and this by a natural instinct more sure than the most

refined reasoning. In swallowing he had also the precaution of inclining the head forwards, as in the case of the Portuguese girl, related by M. de Jussieu.[a]

" From all of these facts, scrupulously observed, it seems evident that the velum pendulum palati is absolutely necessary, especially to new-born infants, and that it serves, at all ages, principally in the deglutition of liquids ; and, secondly, that it is further of marvellous use in sonorous articulation, and in giving to the voice its agreeable qualities, as I have previously observed, and as the following fact will demonstrate :—

" My son, whose sad situation I have just described, remained as if dumb until the age of four years, or if he spoke, it was, in a manner, unintelligible. At this period he began to pronounce more distinctly, but his voice was always embarrassed, and wanting in flexibility. In order to overcome this inflexibility, I thought of causing him to tattle unceasingly, in order that the frequent vibration of the fibres of the glottis might render them supple and nimble, and thus remove the stiffness and harshness so painful to me in the voice of my son. This expedient perfectly succeeded : by means of this continual babbling, which I took care to animate, his organ became supple and pliable to the most varied inflexions : the air, which, by the constant movements of inspiration and expiration, quits the lungs or enters them by the opening of the glottis, caused an insensible vibration in the nasal fibres by the accelerated movement of an uninterrupted tattle."

Eustache continues :—

" A modern philosopher considers the organ of voice as a stringed instrument. The air escaping from the lungs is driven against the tendinous fibres of the glottis, causing them to give out sounds, the result of their vibration. Upon the flexibility of these fibres or vocal cords, upon their agility, and upon the precision of their vibrations, the voice depends for all its agreeable qualities—as the clearness of sound under ordinary circumstances, the softness of warbling in song, the delicacy of a modulation, and the brilliancy of a pearled cadence. But, in order to produce all these agreeable effects, there must be no deformity of the buccal cavity. You are aware, gentlemen, that such as are deprived of the soft palate, as well as those in whom this membranous partition is divided, have a disagreeable nasal tone of voice. This was the case with my son ; for, although by the means employed as above described, he succeeded in pronouncing very distinctly, his voice was far from agreeable—he spoke through the nose, from the fact of the air, upon its escape from the glottis, not being directed by this partition into the posterior nares ; on the contrary, the greater portion passes by the mouth, and the sounds formed not being reflected into the nasal cavities, the voice has no agreeable qualities.

[a] Memoires de l'Académie des Sciences, 1718.

"I pass over in silence many other phenomena observed upon my infant. M. Dodart, who has written an admirable paper upon the mechanism of the voice,[a] treats this matter in a manner which embellishes and fortifies my observations; but, inasmuch as the vain display of learning would add nothing to the verity of the facts I have just exposed, I shall content myself with referring my readers to his paper.

"I have frequently presented my son to many members of the Academy of Science and Belles-lettres of this city, and the different experiments above related were performed in their presence. It is now about three months since this dear child died from an attack of small pox. He would at present have attained his fifth year."

### Subsequent Observations in support of the above.

"OBS. II.—M. Rey, *Avocat au Parlement*, called me in on the 12th of October, 1779, to see his daughter, aged twelve days. M. Foulquier, the surgeon generally attending the family, informed me that it had been impossible to suckle this child, and that its only nourishment had been goat's milk, administered in small spoonfuls. On examining the buccal cavity, we found that this child was deprived of the velum palati almost in the same manner as my son, but with this difference—that in the place of the pillars there was on each side a caruncula the size of a pea, and at the point corresponding to the articulation of the cuneiform apophysis of the occipital with the body of the sphenoïd, there existed a fleshy excrescence the size of a bean. I determined upon following the same course as in the case of my infant. This little one commenced to suck from the breast on the sixth day, but with great difficulty; the greater portion of the milk returned by the nose. She was sent out to a wet nurse in the country, but afterwards brought back to town by my advice, but all in vain. The same vice continuing to exist, the difficulty of suckling remained the same, the convulsions redoubled, extreme wasting resulted, and the little patient fell into a low fever. The impoverished state of the blood occasioned, in different parts of the body, tumours which suppurated, death at length closing the scene after five months of suffering.

"OBS. III.—On the 6th of June, 1781, Dr. Rouillet begged me to see the child of a M. Fabregues. The child was twenty days old, and all attempts to suckle it had been fruitless. On first sight it was perceived that the infant was the subject of hare-lip. The slightest drop of fluid—all of which, besides, returned in a great measure by the nose—excited violent convulsions. I attentively examined the interior of the mouth, and clearly perceived that the soft palate was wanting. The rest being perfect, I ordered the administration of pap, which was easily swallowed, but his stomach not being able to support this kind of food, he perished on the twenty-fifth day after birth.

[a] Académie des Sciences, Annee 1700.

"OBS. IV.—M. Cassan, merchant, of Pézénas, consulted me on the 14th of June, 1781, about his daughter, who, fifteen days old, had not been able to take the breast up to that time, the least liquid causing suffocation. The same means employed in my son's case were resorted to—she being deprived in the same manner of the velum pendulum palati—but all in vain. When applied to the breast the accidents were renewed, the liquids did not pass: she fell into the last degree of marasmus, and expired three months after birth.

"OBS. V.—On the 12th of September, 1781, I was called to an infant of Jacques Visset, blacksmith, at Sauvain, a village a league distant from Beziers. M. Valouzière, master of surgery, met me there. This child, only eight days old, had not been able to take the breast, and had suffered similar accidents to those related in the preceding cases. On examining the mouth, we became convinced of the absence of the soft palate. I advised the child to be fed with pap, which was easily swallowed; suckling was from time to time attempted, but without success, every attempt renewing the anxiety and distress. She died on the fortieth day after birth, wasted and extenuated.

"OBS. VI.—The following case was communicated to me by M. Cabanon, *maître en chirurgie à Capestan*, three leagues from Beziers. He was called, during the month of September, 1782, by André Espéron, to see a child four days old, whom they had been unable to suckle, and to whom it had not been possible to administer liquid of any kind.

"It resulted, from the examination, that this little patient had no soft palate. So long as she lived she was fed with pap; without being very stout, she seemed in tolerable health. Almost the entire village were witness of the fact that, whenever it was attempted to administer any liquid, the child was in danger of suffocation, and that the fluid was almost entirely ejected by the nostrils. She died suddenly at about the age of nine months, without its being possible to determine the cause of death.

"From all these observations I conclude that, whenever an unfortunate infant is born without the velum pendulum palati, that it is essentially necessary to feed it from the first with pap; but, especially, we must abstain from applying it to the breast. The difficulty experienced in the act of suction, the accidents which result, the convulsions which follow, with the anxiety tormenting him, are so many causes of irritation, producing marasmus, &c., and conducting at length to the tomb. If I had in every case followed this method, perhaps not one of these tender victims whose cases I have related above would have perished. I leave this reflection to your judgment."

The following remarks are those which M. Verneuil appended to the observations of Eustache :—

"Before producing the second part of this paper, where we shall find the operation of staphyloraphy indicated, and described in so remarkable a manner, I desire to dwell a short time upon the preceding facts, in order to show all their importance—abstraction being made of the question of operative surgery.

" The primitive malformation now occupying our attention was already known ere the end of last century, were it only by those surgeons who had observed *complicated* hare-lip. But we believe that, previous to Eustache, none had studied the simple lesion, as confined to the soft palate : it is certain that no one had, previous to this, so exactly described the consequences and prognostics. Our author, on the contrary, after having described and insisted upon the essential uses of the velum pendulum palati, enumerates very faithfully the accidents resulting from its vicious conformation, viz. :—the impossibility, and even dangers, of suckling ; the imperfection of language from default in the pronunciation, &c. After which he indicates the proper means of preserving the precarious existence of the unhappy beings thus affected ; and he demonstrates the efficacy of his councils by the example of his own son, who survived the first year of existence, only perhaps on account of the minute care taken to insure his alimentation.

" The series of facts produced by Eustache demonstrate the extreme gravity of congenital fissure of the soft palate—gravity partaken by this deformity with congenital fissure of all the structures, lip, hard and soft palate, and upon which modern authors themselves do not, perhaps, sufficiently insist. Upon a given number of infants born with an extensive fissure of the palatine arch, how many survive and how many succumb? This, exact statistical documents do not permit us to decide ; but it is certain that a very large number perish at an early period. This is a fact pointed out by Dieffenbach and others, and which has been, on many occasions, confirmed in the discussions of the Société de Chirurgie. Further, it is evident that the prognostic, other things being equal, is more serious in cases of fissure of the velum palati than in cases of hare-lip, inasmuch as the latter may be remedied at a very early age, while the operation of staphyloraphy is almost unanimously postponed to the period of adolescence, and not without good reason.

" One will further remark in the case of the son of Eustache, the kind of vocal gymnastic instituted with success by the father ; also, that secondary increase of the velum palati, being a kind of natural autoplasty by which the soft palate seemed, towards the twentieth month, to become much more developed posteriorly."

In a nosographical point of view this first portion of the papers by Eustache presents most incontestible interest ; it may also be consulted with advantage by such surgeons as would write a useful paragraph *on*

*the precautions necessary to assure the existence of infants affected with congenital fissure of the velum pendulum palati.*

This hiatus, to which M. Verneuil so justly draws attention, has long since struck us, for we have, as the profession is aware, paid particular attention to the *therapeutique* of primitive vices of conformation. In all the observations of individuals affected with cleft palate which have fallen under our notice, we have carefully remarked the special attentions employed during their lactation, and to which they were indebted for their existence.

These artifices vary according to the extent of the congenital injury. When the solution of continuity affects merely the velum palati, as in the case of the son of Eustache, maternal suckling is still possible; but, in order to its facility, the infant must be applied to and retained at the breast in the vertical position. It was in this way that M. Stephenson (the American medical man upon whom M. Roux performed his first operation of staphyloraphy) was nursed. M. Roux took care to point out this happy inspiration of the mother of M. Stephenson in his first paper upon this subject, and he repeats that he has since had many occasions to recommend the same precaution, and that he has seen it succeed in every case where the injury was the same in extent. This expedient is of more value than that of Eustache, inasmuch as many of the infants which he caused to be fed with solid aliments succumbed, as seen by his observations. If his son survived, this result was owing to his continued application to the breast, in spite of the administration of pap, and especially to the incessant attentions with which he was surrounded.

When the cleft velum is accompanied by hare-lip, single or double, which is frequently the case, maternal suckling is no longer to be thought of, the infant not being able to seize the nipple. In these cases, as in that of Lemaitre, a sucking-bottle must be resorted to. The nipple of this instrument must also be longer than under ordinary circumstances; and again, its orifice must be narrow in order to allow a feeble flow of its contents; the act of deglutition being very slowly accomplished, there is thus no penetration of liquid into the air passages.

But, to return to our principal subject, which we may do without quitting the interesting observations furnished by the Surgeon of Beziers. It has been observed, that immediately on the child being weaned, Eustache no longer speaks of the obstacles to the alimentation of his infant resulting from the bifidity of his palate; the fact is, that the education of the parts has been promptly accomplished. In spite of their infirmity these little patients are not long before eating and drinking with the same facility as healthy subjects of the same age. One sees that upon the child being weaned, the arrest of development ceases to compromise its existence.

At this period a new series of trials arise—those relating to the phonic apparatus, and these are of longer duration. Although the first cries of the infant may be unmodified by the cleft palate, this is no longer the case with articulate sounds, so soon as the epoch arrives when the child begins to talk. The incomplete development of these parts renders speaking laborious, and infants affected with this vice of conformation must needs be incited; if they are abandoned to themselves they remain mute, or only utter sounds ill articulated. Without great patience and especial attentions, similar to the example furnished us by Eustache, we cannot arrive at the removal of this state of things, and the voice remains offensive and disagreeable.

This imperfection of speech exercises a serious influence upon the character of these infants, although they may make themselves understood by their parents, it is no longer the case when they address themselves to their little comrades, who refuse to allow them to join in their games. Again, at a later period, when the moment of commencing their education has arrived, the difficulty of making themselves understood disables them from profiting from the advantages of public instruction. Deprived of the stimulus of emulation and remaining at home, they study but little, work badly, and become unceasingly discouraged, and rarely arrive at the completion of their particular studies.

And still, by perseverance and a but slightly special study, commenced at an early age, this vice in their pronunciation might be so far corrected as to allow them to become acquainted with other than mere family life. It is not necessary that the amendment should be so very considerable, in order to suggest to them the idea of entering into society, it suffices that their conversation becomes comprehensible. Accustomed from their infancy to their mode of speech, they are only imperfectly conscious of their defective language, and so soon as their hearers manifest no difficulty or fatigue in conversing with them, they forget whatever there may be unusual in their manner of speech.

Reading aloud, declamation, and even singing, are the exercises most adapted to improve their pronunciation. Under the influence of this gymnastic, the voice attains a greater extent, becomes less veiled, less nasal, and articulation of sounds less defective. Here we observe something analagous to what has already taken place with regard to the deglutition of liquids. When one observes these extensive clefts of the palate, one is astonished to see the subjects of them drink as naturally and promptly as if the palate were in a state of perfect integrity.

Nature possesses an infinity of resources. Should the integrity of an organic apparatus become compromised, its functions are not, as a consequence, destroyed. At first, their exercise is more or less interfered with; but if, by a forced and constant gymnastic, the remaining parts are brought into action, we gradually see the inconveniencies which had

arisen disappear, and the apparatus, however incomplete it may be, recovers, in a great measure, its functions. "La fonction fait l'organe," says M. J. Guerin; we have a new proof of this dogma. Deglutition an act of organic life, incessantly reproducing itself, the education of the remains of the palate, is quickly accomplished, and even liquids are, in a short time, ingested without accident. It is different with regard to the concurrence of these parts in the act of phonation. This function is under the control of animal life, and exacts the concourse of the will, and of a will the more energetic according as the alteration in structure renders its accomplishment more laborious. However, it is but a difficulty which may be overcome by the prolonged and oft-repeated exercise of the injured organs.

Should the results leave us still something to desire, especially concerning the nasal tone of voice, we have the resources of prothetic apparatus.

In the example we have given of the excellent results of the employment of an obturator with artificial velum, the patient was fifty-four years of age, and still his education, as we have remarked, was more rapid than that of individuals much younger. The desire of succeeding, comes in aid of the injured organs. But this is not the only example which we have at present before us : M. Prêterre has shown us many cases of young people now under his treatment. We intend to publish, at a future period, the complete notes of these cases.

It is especially the young who will reap the greatest benefits from prothesis, and more peculiarly those already enjoying a large share of physical qualities. Nothing spoils so much the charm of beauty, or tarnishes its brilliancy, as the imperfection of language such as results from cleft palate.

The greatest obstacle to the common use of the obturator, with movable velum, is the cost. Allow us to remark that the price of such an apparatus is not at all exorbitant ; and, further, that these prothetic aids are indispensable only to the easy classes of society. M. Roux will again furnish us with proof :—" One conceives that, to a man destined to manual labour, necessitating but slight intellectual intercourse with his fellow-men, such and such a tone of voice is of little importance, and that even the most defective manner of speaking rigorously suffices him. Of what use would a more perfect language be to him? Consequently, a man in this condition rarely makes any great effort to alleviate the results of this deformity ; and it is even difficult to instil into him a desire to be delivered of his infirmity. I can easily count, so few is their number, the peasants and individuals belonging to the lowest classes of our city populations upon whom I have practised staphyloraphy ; and, again, the greater number submitted to the operation rather from the persuasion which chance threw it in my power to exert on them, than from any prospect of great change in their manner of speaking. I have seen patients refuse,

at the last moment, to submit to the operation to which they had previously consented."

We have sufficiently enlarged upon the resources offered by prothesis. Let us now say a few words as to the succour held out by operative surgery. When the fissure affects simply the velum pendulum palati, the results of autoplasty are complete, and, in this case, superior to those of mechanical prothesis; but when the fissure extends to the hard palate—and it is these cases we have especially in view—it is no longer the same. The surgeon can only unite the two portions of the velum pendulum palati, so that there is still left the breach of the hard palate.[a] At the age when staphyloraphy may be attempted with success, there is no longer any hope of seeing the bony portions of the palate unite by a natural approximation; the patients will, in spite of the success of the autoplastic operation, be obliged to resort to some artificial means of closing the remaining aperture.[b]

Previous to the epoch when the artists devoting themselves to buccal restorations had succeeded in constructing an obturator with an artificial velum capable of supplying the place of the normal soft palate, operative surgery was in the right whilst seeking to establish the continuity of this membrane, inasmuch as the parts were thus placed in such a condition that prothesis could complete the work of restoration by the simple adaptation of a metallic plate. But, is it now the same? Evidently not. Since the individuals affected with complete cleft of the palate are compelled to wear an instrument, that this apparatus should be more or less complicated is a question of slight import. The palatine plate is the most embarrassing portion of the piece, from the many points of support which

[a] Since our principal object is to demonstrate the resources offered by mechanical apparatus, we must recall to mind an article which we published long since, "On the Employment of Maxillary Compressors in Cases of Hare-lip, complicated by congenital fissure of the palatine arch, and of the projection of median tubercule.—(Bulletin de Thérapeutique, t. xliv., p. 254 et 447.)—To the facts which we produce in support of the good effects of these apparatus, we must add the following, which was borrowed by M. Roux from the practice of Montain (de Lyon). We quote the words of M. Roux :— "This operation (the staphyloraphy) was scarcely created, and the first results I had obtained by it scarcely known, when M. Montain and myself had simultaneously the same idea—that of provoking in very young subjects the approximation of the two portions of the palatine arch in cases where the cleft affects this as well as the soft palate. Each conceived the idea of a double compression, applied on each side to the superior maxillæ. In one case he treated, and obtained this approximation of the two separate portions of the palate, the patient was but a few days old. He afterwards obtained complete adhesion, but without employing either scalpel or suture : he contented himself with cauterizing, at intervals, the edges of the remaining fissure, and thus obtained occlusion."

[b] It will be seen by reference to the able paper of Mr. M. H. Collis, in our 21st Vol., that Dr. Debout quite under estimates the value of autoplastic operations. In the Report on Surgery in our present number, p. 436, some further suggestions on the subject will be found.—[ED.]

it has upon the teeth ; whereas the pharynx and base of the tongue quickly become accustomed to the contact of the artificial velum ; and, moreover, the trial of such an apparatus is inoffensive ; and as it may be applied at a time of life when staphyloraphy is still impossible, nothing hinders its being tried.    Should it be found wanting in efficiency, no time has been lost, and the patient can always claim the succour of autoplasty, and he will take his determination with a knowledge of the cause.    Should the operation of staphyloraphy not succeed, he can again return to the use of his obturator with movable velum ; all that would be necessary is the slight enlargement of the plate of caoutchouc, the fissure having been made larger, and a slight increase in the force of the spring supporting this plate, inasmuch as the muscular tissues pressing upon the artificial velum would have been weakened.

Besides, we can strengthen our opinion by that of an eminent surgeon. Since he has observed, as ourselves, the results furnished by the obturator with movable velum, M. Nelaton has completely renounced the practice of staphyloraphy in cases of cleft affecting the hard and soft palate, even in those cases where there exists no deformity of structure : as, for example, in cases where it has been necessary to sacrifice the palate in the extraction of a fibrous polypus from the nasal fossæ.

In the actual state of science we do not hesitate to declare that in cases of complete cleft palate—that is to say, in cases where the fissure affects both bony and soft structures—*the resources offered us by prothesis are greater than those of operative surgery.*

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DEBOUT, D.M.S.,

*Member of the Surgical Society, and President of the*
*Medical Society of Paris.*


*Bulletin Général de Therapeutique.*

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## BOOKS RECEIVED MAY, 1862.

1. Handbuch der Lehre von den Knochenbrüchen. Von Dr. E. Gurlt, Ester oder allgemeiner Theil. Berlin: Max Hirsch. 1862. 8vo, pp. 800.

2. The Climate of Algiers in reference to Chronic Affections of the Chest. By P. de Pietra Santa, M.D., &c. London: Baillière. 1862. 8vo, pp. 61.

3. Petersburger Medicinische Zeitschrift, I-V. Heft.

4. On the use of Anestactics in Midwifery. By B. F. Barker, M.D., &c. From Transactions New York Academy of Medicine. Pamphlet. pp. 18.

5. Transactions of the Epidemiological Society of London. Vol. I., Part II. Davies. 1862. pp. 128.

6. On the Teething of Infants. By H. Hanks, L.R.C.P., Ed. London: Davies. 1862. Fcap. pp. 124.

7. A system of Surgery, Pathological, Diagnostic, Therapeutic, and Operative. By Samuel D. Gross, M.D., &c. 1227 engravings, second edition, 2 vols. Philadelphia: Blanchard and Lea. London: Trübner and Co. 1862. 8vo, pp. 1062 and 1134.

8. On Dropsy connected with Diseases of the Kidneys (Morbus Brightii), and on some other diseases of those Organs, associated with Albuminous and Purulent Urine. Illustrated with numerous drawings from the microscope. By W. R. Basham, M.D., &c. Second Edition. London: Churchill. 1862. 8vo, pp. 347.

9. A Treatise on the Physiological Anatomy of the Lungs. By J. N. Heale, M.D., &c. London: Churchill. 1862. 8vo, pp. 84.

10. Traite Pratique de Médecine Légale, Rédigé d'après des Observations personnelles. Par J. L. Casper. Traduit de L'Allemand. Par G. G. Baillière. Tomes II. Paris: Baillière. 1862. 8vo, pp. 439, 608.

11. Le Médecin des Villes et des Campagnes. Par le Docteur Munaret. 3ème Édition. Paris: Baillière. 1862. Fcap. 8vo, pp. 600.

12. The Royal London Ophthalmic Hospital Report, and Journal of Ophthalmic Medicine and Surgery. No. IV. Churchill.

13. Contributions to the knowledge of Osteo-Malacia. By Dr. C. C. T. Litzmann. Translated by Dr. J. M. Duncan. Edinburgh: Oliver and Boyd. 1862. 8vo, pp. 41.

14. Neuenahr: A new Spa on the Rhine. By James Miller, Professor of Surgery, Edinburgh, &c., &c. Edinburgh: Oliver and Boyd. 1861. 8vo, pp. 35.

15. Twenty-fourth Annual Report of the Suffolk Lunatic Asylum. 1862.

16. Illustrations of Puerperal Diseases. By Uvedale West, M.D., &c. London: Churchill. 1862. 8vo, pp. 84.

17. The Intellectual Observer. Review of Natural History, Microscopic Research, and Recreative Science. No. I. London: Groombridge and Sons. 1862. 8vo, pp. 84.

18. Public Health in relation to Air and Water. By W. T. Gairdiner, M.D., &c. Edinburgh: Edmonston and Douglas. 1862. Fcap. 8vo, pp. 369.

19. Homeopathy as practised in Manchester, contrasted with its alleged principles. By W. Roberts, M.D., &c. Manchester: Kelly. 1862. Pamphlet. pp. 84.

20. On the Therapeutic Law of Specific Remedies. By A. de Noe Walker, M.R.C.S.E., &c. London: Clayton. 1862. Pamphlet. pp. 16.

21. Sixth Annual Report of the Nottingham Asylum, for 1861.

22. An Effectual and Simple Remedy for Scarlet Fever and Measles. By Charles Witt, M.R.C.P., &c. Third Edition. London: Davies. 8vo, pp. 31.

23. A Clinical Treatise on Diseases of the Liver. By Dr. Frerichs. Vol. II. New Sydenham Society. 1861. 8vo, pp. 584.

24. Proceedings of the Pathological Society of Philadelphia. Vol. I. J. B. Lippincott and Co. 1860. 8vo, pp. 307.

25. Précis Iconographique des Maladies Vénériennes. Par M. A. Cullerier. 3ème livraison. Paris: Mequignon Marvis. 1861. Small 8vo, pp. 71.

26. Consumption, its early and remediable stages. By Edward Smith, M.D., &c. London: Walton and Maberley. 1862. Post 8vo, pp. 447.

27. Ten days in Athens, with Notes by the Way. By Dr. Corrigan, Physician in Ordinary to the Queen in Ireland, &c., &c. London: Longmans. 1862. Post 8vo, pp. 227.

28. The Pathology and Treatment of Phlegmasia Dolens, being the Lettsominian lectures on Midwifery. By F. W. Mackenzie, M.D., &c., London: Churchill. 1862. 8vo, pp. 131.

29. I. Syllabus of the Lectures on the Causes of Fevers, delivered during the Session of 1860-61. With an Etiological Nosology. II. An Etiological Nosology of the Diseases of the Skin. By Thomas

Laycock, M.D., &c. Edinburgh: Printed by Neill and Co. 1861-62. 8vo, pp. 19, 21.

30. The Health of the Royal Navy Considered. A Letter addressed to the Right Hon. Sir J. S. Pakington, Bart. By Gavin Milroy, M.D., &c. London: Hardwicke. 1862. 8vo, pp. 69.

31. The Placenta and Organic Nervous System, the Blood, the Oxygen, and the Animal Nervous System Physiologically examined. By J. O'Reilly, M.D., &c. New York: Wood. London: Churchill. 1861. 8vo, pp. 204.

32. Considérations Pratiques sur les Hernies Ombilicales Congénitales et leur Traitement. Pamphlet. (Reprint.) pp. 35.

33. Sur le Pessaire Grandcollot, Rapport fait a L'Académie Impériale de Médecine, Séance du 11 Janvier, 1862. Par M. Alph. Robert. Paris: Baillière. Pamphlet. (Reprint.) pp. 8.

34. Beiträge zur Chemischen Analyse durch Spectralbeobachtungen, Inaugural dissertation zur Erlangung der Doctorwürde, der hohen philosophischen Facultät der Hochschule zu Bern, überreicht von Rud. T. Simmler, von Zurich. 1861. pp. 59.

35. Programm der Berner Kantonsschule. 1861.

36. Verzeichniss der Vorlesungen welche an der Hochschule in Bern gehalten werden sollen. 1861-62.

37. Die Uroscopie am Krankenbette. Inaugural dissertation vorgelegt der hohen medizinischen Fakultät Bern, von Dr. Adolf Zeigler. Bern. 1861.

38. Behandlung des akuten Gelenkrheumatismus mit Veratrin. Inaugural dissertation von Dr. Med. A. Hänggi, Arzt in Thun. 1861.

39. Del Fedeecommesso Famigliare Dissertazione Inaugurale da Roggo Togni Stud. Juris. Bellinzona. 1861.

40. Ten Years of Operative Surgery in the Provinces. Being the Record of 875 Operations performed from 1850 to 1860. By A. Prichard, F.R.C.S. Part I., London: Richards. 1862. Post 8vo, pp. 174.

41. The Examination of the Chest, in a Series of Tables. By G. N. Edwards, M.D., &c. London: Churchill. 1862. Royal 8vo.

42. On Long, Short, and Weak Sight, and their Treatment by the Scientific Use of Spectacles. By J. S. Wells, M.D., &c. London: Churchill. 1862. Royal 8vo, pp. 112.

43. Sixteenth Annual Report of the Devon Lunatic Asylum. 1861. 8vo, pp. 29.

44. Transactions of the Levant Quarantine Association of Constantinople. Vol. I. Part I.

45. Psychological Inquiries. The Second Part. Being a Series of Essays intended to illustrate some points in the Physical and Moral History of Man. By Sir Benjamin C. Brodie, Bart. London: Longmans. 1862. Fcap. pp. 247.

46. Essays on Scientific and other subjects contributed to the Edinburgh and Quarterly Reviews. By Sir H. Holland, Bart., M.D., &c. London: Longmans. 1862. 8vo, pp. 496.

47. Transactions of the London Obstetrical Society. Vol. III. 1861. London: Longmans. 8vo, pp. 480.

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## NOTICES TO CORRESPONDENTS.

The next number will contain a Retrospect of the Progress of Medicine during the Last Decade, prepared by R. D. Lyons, M.D., Professor of the Practice of Medicine in the Catholic University and Physician to Jervis Street Hospital. Retrospects on Psychological Medicine, Therapeutics and Materia Medica, and on Midwifery, Physiology, Ophthalmic Surgery, &c., &c., will follow.

We have been obliged to hold over several Reviews and Original Papers.

Books and Periodicals published in Northern Europe and the German States, intended for our Journal, should be transmitted "For the Editor of the Dublin Quarterly Medical Journal, care of Messrs. TRUBNER and Co., *London*," *through their Correspondents* in the principal Towns on the Continent. Our Correspondents in France, Belgium, Italy, and Spain, are requested to communicate with us through "DOCTOR HIGGINS, 212, *Rue Rivoli, Paris.*"

AMERICAN Books and Journals often come to hand with such an amount of Charges on them, that we cannot release them. It is requested that *all* communications from the United States shall be forwarded to MR. JOHN WILEY, *New York;* or Messrs BLANCHARD and LEA, *Philadelphia*, directed to us, to the care of Messrs. TRUBNER and Co., *London*.

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